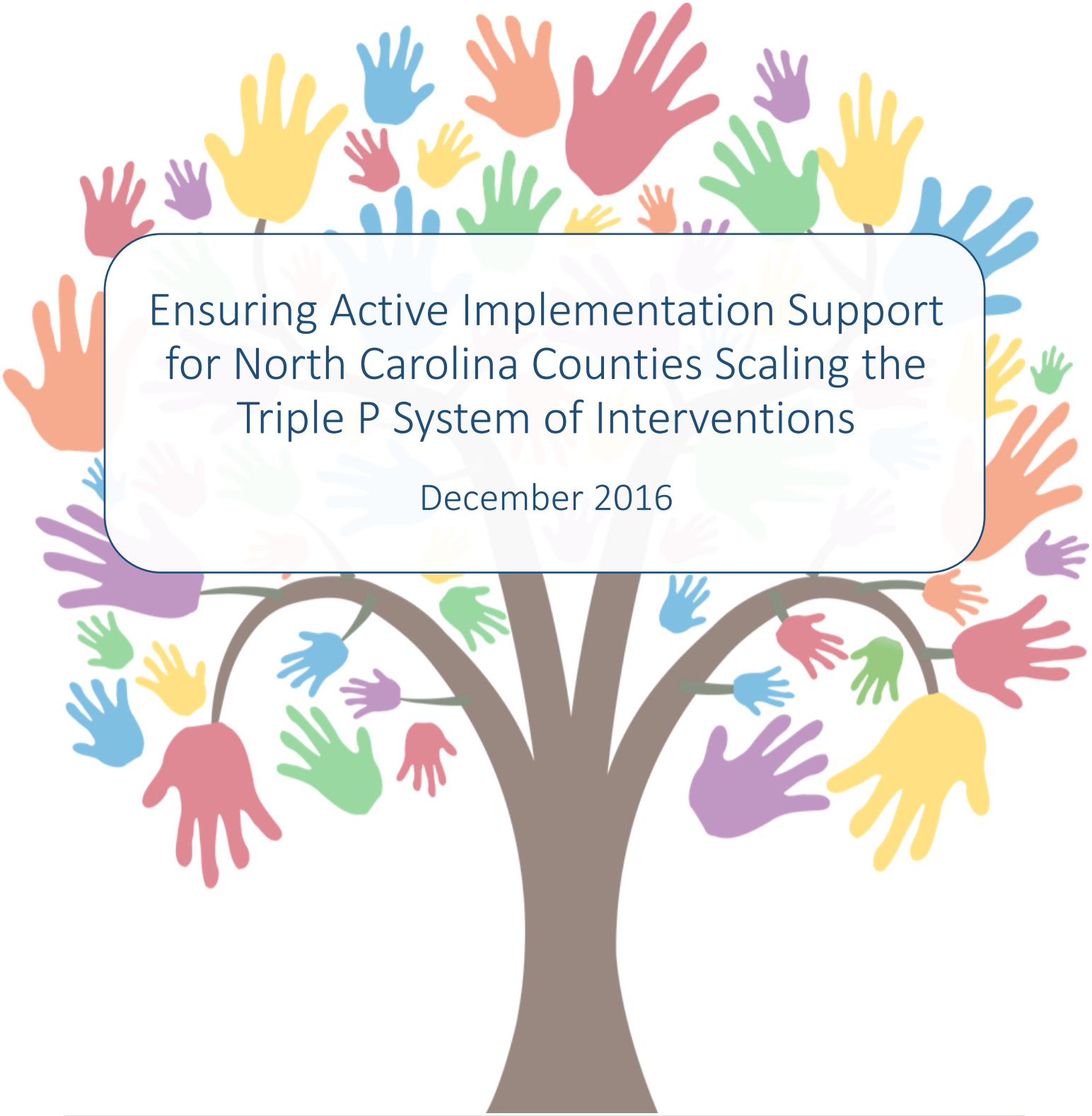
NCIC-TP
North Carolina Implementation Capacity for Triple P



Ensuring Active Implementation Support for North Carolina Counties Scaling the Triple P System of Interventions

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The purpose of this implementation support plan is to provide detailed information to state and local Triple P coordinators, funders, policymakers, and technical assistance providers about the core principles, partner roles, coordinated activities, and outcomes for the provision of active implementation support to NC counties scaling the Triple P system of interventions.

Background

Evidence-based prevention and wellbeing programs offer a great deal of promise to support the health and wellbeing of North Carolina children, youth, families, and communities. In fact, many funders and service providers in North Carolina are shifting towards models that have demonstrated positive impact through rigorous evaluations. However, implementing and scaling-up these innovations can be a challenge in the context of business as usual. Despite best intentions, longstanding, complex service systems have a tendency to pull innovation back to past practice. This challenge can prevent evidence-based strategies from achieving expected outcomes, including in North Carolina.

The North Carolina Implementation Capacity for Triple P (NCIC-TP) project aims to develop methods, materials, and opportunities to support North Carolina counties to successfully and sustainably scale the Triple P – Positive Parenting Program (Triple P) system of interventions so that population-level benefits are realized for local children, families, and communities. To address typical challenges related to implementation and scale-up, NCIC-TP leverages:

(1) Current research and best practices from implementation science,

(2) Mixed-methods evaluation findings from the North Carolina Triple P Implementation Evaluation (TPIE), and

(3) Partnerships with statewide stakeholders involved in scaling-up the Triple P system.

Implementation Science

Current research and best practices from implementation science provide the backbone for NCIC-TP. Research and applied learning from efforts to successfully implement and scale evidence-based programs have been amassing over the past two decades.[2-4] Among ready organizations and systems, developing and sustaining local capacity around core implementation processes have emerged as essential parts of success and sustainability.[4,5] Although a number of implementation science frameworks are now available to make sense of key implementation concepts, the most promising approaches to implementation and scale-up give strong attention to three key features of local implementation capacity:

(1) Linking local leadership and implementation teams within (e.g., individual service agencies) and across (e.g., community coalitions led by local backbone organizations, statewide intermediary organizations, and state service agencies to support implementation) levels of community service systems;[2,4,6-20]

(2) Best practices for practitioners' professional development (i.e., selection, training, coaching) to deliver programs as intended and with expected benefits for children and families;[21-34] and

(3) Quality and outcome monitoring for systems or organizational improvement and program optimization.[4,27,35-42]

For *communitywide prevention and wellbeing efforts*, developing media and networking strategies to mobilize knowledge and behavior change also appears to be important for achieving population-level outcomes.[14,43-49] NCIC-TP makes systematic efforts to blend leading-edge implementation science and best practices into all evaluation and implementation support activities.

North Carolina Triple P Implementation Evaluation (TPIE)

To bring the science of implementation closer to the ground-level in North Carolina, NCIC-TP was also founded on two implementation-science-based evaluations of Triple P in North Carolina: TPIE and TPIE-Qualitative. From January 2014 through December 2015, TPIE evaluators examined the implementation and scale-up of the Triple P system in Cabarrus and Mecklenburg counties. Specifically, the purpose of TPIE was to evaluate *capacity and infrastructure for the active implementation of Triple P* to inform the planning process for impact and sustainability. In late winter and early spring 2016, the TPIE team added a qualitative evaluation component (TPIE-Qualitative) to better understand the findings from the initial implementation evaluation and further improve the planning process for Triple P impact and sustainability. Although highlights of evaluation results are touched upon in this section, detailed evaluation backgrounds, evaluation findings, and lists of evaluators' recommendations are available in the TPIE Final Report[50] and the TPIE-Qualitative Report,[51] both of which are located on the NCIC-TP website at http://ncic.fpg.unc.edu/lessons-learned.

TPIE results[50] highlighted several strengths of local Triple P implementation capacity in Cabarrus and Mecklenburg counties during the evaluation period, including the capacity of county Triple P leadership teams, the capacity of Cabarrus County's Implementation Team, counties' Triple P practitioner recruitment and selection processes, local Triple P training processes, and county-level Triple P decision-support data systems and quality improvement processes. In addition to these strengths, four areas of implementation capacity needed *particular attention and further development*: **agency implementation team structures**; **infrastructure to support Triple P practitioners' ongoing coaching following accreditation**; **Triple P fidelity assessment practices**; and **infrastructure for using Triple P data and feedback about implementation barriers and facilitators for agency Triple P quality improvement**.

Four risk factors for service agencies' discontinuation of Triple P implementation were also identified during TPIE, including having:

(1) **Only one Triple P practitioner** within the service agency (this does not pertain to private/independent Triple P practitioners);

(2) **Less developed agency Triple P leadership and implementation team structures**;

(3) A **less hospitable agency implementation climate for Triple P**, which may be indicative of lower agency leadership and management support for Triple P;[52] and

(4) **Less formalized or documented agency Triple P sustainability plans**.

At the county-level, TPIE results also suggested that the successful scale-up of Triple P may be more challenging if the **county implementation team has less capacity** (particularly in terms of formally allocated time and effort for team members), the **county doesn't have adequate financial resources to support local Triple P scale-up**, and **if the county prevention system and population are larger or are more complex**.

TPIE-Qualitative results[51] reinforced many of these initial TPIE findings and added a handful of additional important points about Triple P scale-up in NC counties. These included: the **need for more active implementation support** to counties scaling, and agencies implementing, Triple P; the **need for robust exploration and readiness processes** at each level of the statewide Triple P system before embarking upon local Triple P adoption or installing new features of Triple P implementation; the **benefits of using a coalition approach** to locally scaling Triple P in NC counties and **ensuring a statewide learning collaborative** for county Triple P coordinators; and the **need for more actively and purposefully involving community members** in the Triple P implementation infrastructure.

Co-Creation Partnerships

Finally, NCIC-TP was developed around a co-creation model of applying implementation science within local contexts. While the science of implementation provides meaningful direction, the utilization of strategies from implementation science, and the development of local implementation infrastructure, requires co-creation from five partners:[53]

(1) Service agency leadership and staff from implementing sites;

(2) State/local funders and policymakers;

(3) Intermediary and purveyor organizations that provide implementation and program support (i.e., implementation technical assistance providers, Triple P America);

(4) Active and involved community members (e.g., community parents and youth being served); and

(5) Intervention developers and prevention scientists.

The successful and sustainable scale-up of Triple P in North Carolina and the realization of population-level prevention and wellbeing benefits will necessitate collaborative partnerships

among all five co-creation partners. NCIC-TP responds to opportunities for co-creation and humbly accepts that the work of implementing and scaling Triple P cannot be accomplished by one or two of these partners alone.

Implementation Support for NC Counties Scaling Triple P

The purpose of this implementation support plan is to detail core principles, processes, features, partner roles, and intended outcomes for the provision of active implementation support to North Carolina counties scaling the Triple P system of interventions. In doing so, the plan takes a customizable and adaptive approach[54,55] to supporting implementation processes rather than prescribing a series of specific steps and procedures.

Objectives of Implementation Support

Active implementation support provided to NC counties scaling the Triple P system of interventions seeks to contribute to several objectives.

(1) Strengthening a **multi-level system of implementation and program support** from state to counties to agencies to practitioners to families.

(2) Organizing and aligning **communitywide implementation capacity**. This includes ensuring adequate implementation capacity within *lead or backbone agencies* and *service agencies* participating in local Triple P coalitions.

(3) Supporting **implementation performance** across lead/backbone agencies and local Triple P service agencies.

(4) **Locally scaling** the Triple P system to respond to identified community needs, characteristics, and readiness.

(5) **Supporting practitioners' delivery** of Triple P interventions as intended and in response to parents' needs and preferences.

(6) Increasing the probability that **intended prevention and wellbeing outcomes** will be achieved at scale.

(7) **Sustaining** Triple P implementation and program performance.

Principles of Implementation Support

Across all partners, the provision of implementation support for NC counties scaling the Triple P system of interventions benefits from being guided by several principles.[1]

(1) **Change requires proactive support**: Like other efforts to change individual and group behavior, implementing and scaling evidence-based prevention strategies requires intentional and focused support. *Proactive* implementation support anticipates needs and incorporates strategic approaches to bring new knowledge, skills, and opportunities for recipients to apply and test new learning – with reinforcement and supportive feedback – in their own systems environments. Such learning and support is often necessary at individual, team, organizational, and system levels.

(2) **Use of implementation science and best practices**: As we ask community leaders and local practitioners to be guided by the science of prevention, so too must co-creation partners involved in supporting implementation and scale-up be guided by the science of innovation implementation. A range of frameworks and tools are now available from implementation science to support the introduction of key concepts and strategies for effective implementation. Furthermore, these frameworks and tools can inform exchanges of ideas with local stakeholders to enable local application and sustainability.

(3) **Co-creation**: The development of local implementation infrastructure is becoming recognized as a process of co-creation.[53,56] Within the co-creation framework, five partners contribute to successful and sustainable implementation and scale-up:

a. Service agency leadership and staff from implementing sites;

b. State/local funders and policymakers;

c. Intermediary and purveyor organizations that provide implementation and program support;

d. Active and involved community members (e.g., community parents and youth being served); and

e. Intervention developers and prevention scientists.

Support for active implementation and scale-up becomes stronger as collaborations and contributions among these five partners increase.

(4) **Contextualized and responsive support**: While the science of implementation provides meaningful grounding for any implementation effort, to increase chances for success and sustainability, efforts to implement and scale-up prevention programs must be optimized within local contexts.[17,57-70] Implementation strategies need to be considered and tailored according to key features of local prevention systems, such as size, history, resources, culture, population density, and political and social complexities. Furthermore, ongoing implementation support needs to be responsive to local progress, setbacks, feedback, and key events.

(5) **Adaptive leadership**: Implementation and scale-up are adaptive processes, not technical processes.[71] Implementation support partners must develop an appreciation for, and comfort with, the diverse perspectives held within local systems environments and begin to recognize these as clues to the presence of adaptive challenges embedded within the system and its people. Heifetz and Laurie[72] put forward six principles of adaptive leadership that can be used to manage adaptive challenges:

a. *Get on the balcony*: step back from daily system operations to see larger patterns of individual and collective behavior and local history that may be either facilitating or hindering the systems' willingness or ability to change.

b. *Identify the adaptive challenge*: take time to clearly define adaptive challenges. Definitions should take into account an understanding of local people, organizational and community history, larger system pressures, and identified sources of conflict.

c. *Regulate distress*: create a functional balance of system stress by using conflict as an opportunity for learning and creativity, sequencing and pacing work, and preventing stakeholders from feeling overwhelmed by change.

d. *Maintain disciplined attention*: maintain focus on tough questions and prevent the avoidance of adaptive work recognized by sliding back into familiar routines or engaging peripheral issues or topics.

e. *Give the work back to people*: build the collective problem-solving confidence of system stakeholders rather than provide expert solutions or let the burden of adaptive work fall on the few identified vocal leaders.

f. *Protect voices of leadership from below*: ensure that the experiences and ideas of those often marginalized in change initiatives, including front line staff and community members, are voiced and play an equal role in generating solutions so that they will be the most successful and sustainable.

(6) **Data-driven progress monitoring and improvement**: As advocates for the translation of evidence into practice, implementation support partners collect and use data to identify local needs and plan responsive support strategies, monitor the progress and outcomes of local implementation efforts, monitor the effectiveness of their own support, and make quality improvements based on data over time.

(7) **Local ownership of progress**: Implementation support partners should promote local systems' ownership of implementation processes and successes. Although external partners can be seen as instrumental to increasing implementation resources and abilities, ongoing success in implementation and scale-up should not be perceived to be due to, or dependent on, external support partners. This principle can be demonstrated by continually promoting *collective-efficacy* within community prevention systems.

Implementation Logic Model

Drawing heavily on Chinman and colleagues' implementation TA logic model,[73] a logic model that describes the relationships between key intermediate and long-term outcomes of active implementation support is provided in Figure 1. **This logic model of implementation support is rather comprehensive and not meant to suggest a prescribed process for scaling Triple P**. Rather, within certain limits, local communities and system partners might customize their level of use of this logic model. For example, local communities may choose to monitor only certain population-level or implementation outcomes articulated in this logic model. Likewise, co-creation partner roles may vary in intensity and function according to local community context.

It is recommended, however, that all communities establish collaborative relationships with the noted co-creation partners, as feasible. Also, attending to each component of local implementation capacity and performance articulated in the logic model may be essential to realizing the full impact of Triple P on population-level outcomes.

Population-level Outcomes

As a part of the North Carolina Triple P Statewide Evaluation, system partners have agreed to monitor three population-level outcome variables that have demonstrated responsivity in prior research on the countywide scale-up of the Triple P system in the Southeastern United States:[74]

(1) substantiated child abuse and neglect,

(2) out-of-home foster care placements, and

(3) child injuries treated in a hospital.

In addition to these recognized statewide evaluation outcome variables, local Triple P coalitions may have interest and resources to monitor other child, family, and community outcomes that have demonstrated responsivity to Triple P use. Triple P, both through individual interventions and the aggregate system, has demonstrated positive child and family outcomes across a number of research and evaluation trials globally. Local Triple P coalitions may benefit from examining the full Triple P evidence-base, available at https://www.pfsc.uq.edu.au/research/evidence/. Readers can query the Triple P evidence-base according to individual Triple P interventions as well as key topics and outcome variables.

NCIC-TP promotes the idea that intervention outcomes, whether individual or population-level, can be optimized in local context.[35] We hope that stakeholders involved in county Triple P rollouts will take advantage of this perspective and strive to move beyond the level of outcomes established in prior Triple P research for the benefit of local communities.

Triple P System Optimization

Reviews of the research literature have made clear that implementation quality impacts the realization of outcomes when evidence-based prevention and wellbeing programs are used in the real world.[75] Perhaps the most recognized feature of implementation quality is *fidelity to the intended delivery* of adopted programs. However, several other implementation outcomes may also be important, particularly as related to achieving favorable service and client outcomes at scale. For example, Proctor and colleagues[76] offer eight core implementation outcomes: acceptability, adoption, appropriateness, cost, feasibility, fidelity, penetration, and sustainability. The NCIC-TP implementation logic model adapts and incorporates essential features of these eight implementation outcomes, and includes other implementation outcomes that may be of particular interest given Triple P's model, history, and ongoing aims in NC counties:

(1) **Accessibility**. Progressing beyond Proctor and colleagues' simpler *adoption* outcome, *accessibility* is defined as the degree to which local families can access parenting and family support in accordance with the level of support they need or prefer.

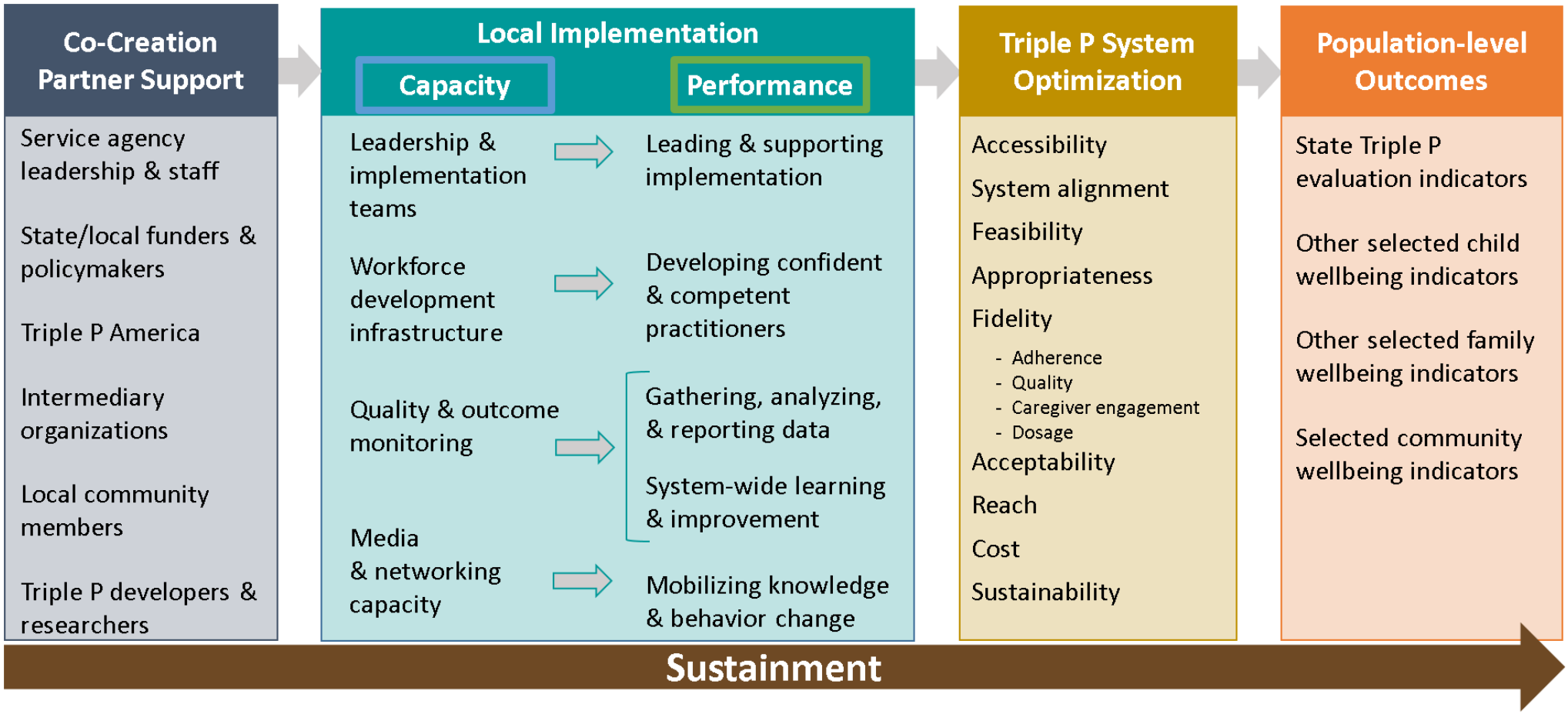

Figure 1. Logic model for supporting the implementation and scale-up of the Triple P system of interventions in North Carolina to achieve population-level outcomes.

(2) **System Alignment**. Not represented in Proctor and colleagues' original list but important for any system of interventions, *system alignment* is defined as the degree to which local service agencies or individual interventions work in concert towards collective wellbeing goals rather than in silos or fragmentation.

(3) **Feasibility**. As defined by Proctor and colleagues (p. 69), *feasibility* is the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting. Feasibility has a lot to do with whether or not the local setting of care has the necessary financial, human, and implementation resources to support delivery of the intervention as intended.

(4) **Appropriateness**. As defined by Proctor and colleagues (p. 69), *appropriateness* is the perceived fit, relevance, or compatibility of the innovation or evidence-based practice for a given practice setting, practitioner, or consumer; and/or perceived fit of the innovation to address a particular issue or problem.

(5) **Fidelity**. As defined by Proctor and colleagues (p. 69), *fidelity* is the degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended by the program developers. Four dimensions of program fidelity relevant to Triple P in NC are detailed by Dane and Schneider[77] and later reinforced by Mihalic,[78] (p. 83) relative to prevention programs:

a. *Adherence* refers to whether the intervention is being delivered as it was designed or written (i.e., with all core components being delivered to the appropriate population; staff trained appropriately; using the right protocols, techniques, and materials; and in the locations or contexts prescribed).

b. *Quality* of program delivery is the manner in which a practitioner delivers a program (e.g., skill in using the techniques or methods prescribed by the program, enthusiasm, preparedness, and attitude).

c. *Caregiver engagement* is the extent to which participants are engaged by and involved in the activities and content of the program.

d. *Dosage* may include any of the following: the number of sessions implemented, length of each session, or the frequency with which program techniques were implemented.

Dane and Schneider and, separately, Mihalic also discuss the fidelity dimension *program differentiation*, which may be more important within controlled research settings than Triple P scale-up in NC counties.

(6) **Acceptability**: As defined by Proctor and colleagues (p. 67), *acceptability* is the perception among implementation stakeholders (e.g., families) that a given practice or program is agreeable, palatable, or satisfactory, as delivered.

(7) **Reach**: Proctor and colleagues use a synonymous term, *penetration*, which is defined as the integration of a practice within a service setting and its subsystems (p. 70). *Reach* might be measured by (a) the number of people who receive an intervention compared to those who are eligible to receive the intervention, or (b) the number of practitioners (actively) delivering the intervention compared to the number trained in or expected to deliver the intervention. TPIE results and experience from Triple P stakeholders in NC suggest that there has been a significant discrepancy between the number of practitioners trained in Triple P and those who remain actively delivering Triple P interventions to local families.

(8) **Cost**: As defined by Proctor and colleagues (p. 67), *cost* is related to the cost impact of an implementation effort. Proctor and colleagues note three cost components may be of interest:

   a. *costs of delivering the intervention*,

   b. *costs of the implementation strategies* that will be used to support the intervention, and

   c. *cost variability* associated with the local service delivery setting.

   An additional variable related to cost, *return on investment*, has received increasing interest and attention relative to the implementation and scale-up of evidence-based practices[79].

(9) **Sustainability**: As defined by Proctor and colleagues (p. 70), *sustainability* is the extent to which a newly implemented intervention is maintained or institutionalized within a service setting's ongoing, stable operations.

System stakeholders involved in different levels of community Triple P rollouts across NC (e.g., state, county, agency, and practitioner) may have varied interest across these nine implementation outcomes. While stakeholders may want to review these alternatives and determine which mix may be of most interest and usability at their system level, NCIC-TP strongly recommends that program *fidelity* is monitored by every system level. Fidelity has demonstrated particular importance in relation to the replication of evidence-based program outcomes in real world implementation.[75,78] In addition, by choosing from and attending to other implementation outcomes, such as *acceptability* and *appropriateness*, we believe that system stakeholders at any level can monitor implementation in accordance with Triple P's stated philosophy of "fidelity and flexibility." Monitoring variables like *acceptability* and *appropriateness* can ensure that interventions core components are reaching local families in a way that is responsive to family needs and preferences.

Finally, NCIC-TP promotes the idea that implementation outcomes, like population-level outcomes, can be optimized in local context.[35] Hence, we refer to this section of the logic model

as *Triple P System Optimization* to reflect the perspective of continuous quality improvement within local contexts.

Implementation Performance

Implementation outcomes are influenced by the level of local implementation capacity and performance.[73] Chinman and colleagues define implementation performance as "the level of quality at which [key implementation support practices] are carried out" (p. 3). The NCIC-TP implementation logic model details five core implementation support practices:

(1) Leading and supporting Triple P implementation and scale-up, including identifying and addressing implementation barriers and spreading successes;

(2) Developing competent and confident Triple P practitioners who can deliver Triple P with fidelity and flexibility;

(3) Gathering, analyzing, and reporting to the right people at the right times program and implementation data related to Triple P delivery;

(4) System-wide learning and continuous quality improvement of Triple P implementation, delivery, and outcomes; and

(5) Mobilizing knowledge and behavior change across communities beyond that created by direct service interventions.

We believe these performance indicators provide congruity with core components of local implementation capacity as described in the next section. These performance indicators are high level and may be further broken down into more specific performance behaviors. For example, leading and supporting Triple P implementation may involve executive leaders' ongoing demonstration of commitment to Triple P implementation (i.e., "implementation climate") and aligning community prevention strategies under common approaches and outcomes of implementation.[8,80] Likewise, developing competent and confidence practitioners may involve high quality practitioner recruitment and selection, training, and coaching practices.[8,27,80]

Local Implementation Capacity

As discussed earlier, NCIC-TP takes a perspective that the most promising approaches to implementation and scale-up give strong attention to three key features of local implementation capacity:

(1) Linking local leadership and implementation teams within (e.g., individual service agencies) and across (e.g., community coalitions led by local backbone organizations, statewide intermediary organizations, and state service agencies to support implementation) levels of community service systems;[2,4,6-20]

(2) Best practices for practitioners' professional development (i.e., selection, training, coaching) to deliver programs as intended and with expected benefits for children and families;[21-34] and

(3) Quality and outcome measurement and monitoring for systems or organizational improvement and program optimization.[4,27,35-42]

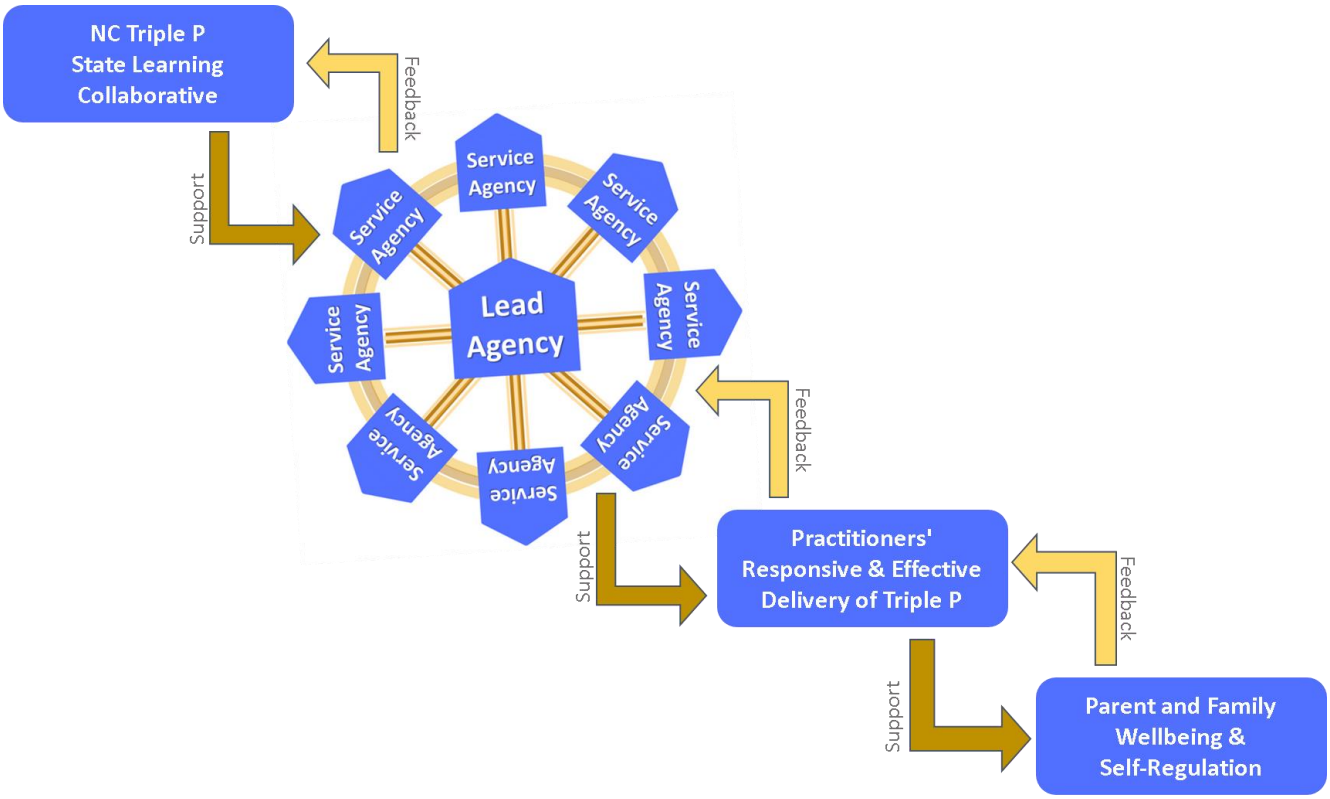

Figure 2. Cascading implementation support for Triple P across NC county prevention system levels.

For *communitywide prevention and wellbeing efforts*, developing media and networking strategies to mobilize knowledge and behavior change also appears to be important for achieving population-level outcomes.[14,43-49]

NCIC-TP recognizes the existing multi-level system of support for the scale-up of Triple P that has already started to develop across North Carolina. Such cascading models of implementation support may provide an effective way to promote meaningful capacity and roles within each level of a statewide system and support overall success.[12,27] Figure 2 presents the state's multi-level system of Triple P support, within which key features of implementation capacity and performance are to be embedded. While feedback loops are presented between single levels of the system, it is acknowledged that feedback from and to each level of the system is likely happening and is important for quality improvement and increasing the likelihood of success.

Co-Creation Partner Support

Co-creation partners working collaboratively to support county Triple P rollouts across NC contribute to the development of local implementation capacity and performance.[53,56] Key

features of co-creation partner roles follow below *yet are not intended to be comprehensive*. Individual co-creation partners may serve a variety of unique *and shared* functions and the nature and intensity of partner roles may shift and change over time as implementation and scale-up progresses.

Local agency leadership & staff

Local leadership and staff within Triple P coalition lead agencies and service agencies have a key role in generating **initial readiness for implementation and scale-up** of Triple P. Local readiness for implementation can be understood as a combination of stakeholders' commitment to the change process and their collective belief that they can make the changes that will be required.[81] Several factors may influence local readiness for change, such as the value placed on making the change, task demands that may be involved, resource availability, and relevant situational factors.

Beyond generating initial readiness for Triple P implementation and scaling, local leadership and staff must continuously ensure several other leadership and coordination functions for actively implementing and scaling Triple P.[8] Those with executive leadership of implementing and scaling Triple P – whether within community Triple P coalition lead agencies or individual service agencies – may support success and sustainability by **demonstrating ongoing commitment** to the change process and change partnerships, and by **creating and nurturing appropriate opportunities for change** within local organizations and systems.[8]

Those leading the development of the community Triple P coalition must also ensure that **Triple P and related family service initiatives are well aligned and usable** by practitioners, **coalition policies and agency practices facilitate delivery** of Triple P interventions as intended, and **system changes and successes are well communicated** across stakeholders and community members.[8]

Finally, those with day-to-day management responsibilities for Triple P program implementation and scaling – whether within community Triple P coalition lead agencies or individual service agencies – support success and sustainability by **ensuring *ongoing* buy-in and readiness for stage-based scale-up** of Triple P in the community; **organizing, aligning, and sustaining the necessary infrastructure** to support Triple P implementation within the community; and by **actively using data and other information for quality improvement** of Triple P implementation.[8]

These leadership and coordination functions can be institutionalized within leadership and implementation team structures at the agency and community Triple P coalition levels. Furthermore, they may be essential to the development and sustainability of local implementation capacity and performance more broadly,[8,12,27] and may support hospitable agency and coalition climates for implementing and scaling Triple P.[52]

State/local funders & policymakers

State and local funders and policymakers have an important role in creating a nurturing systems environment for county Triple P rollouts. In particular, key functions include:[82]

(1) **Ensuring the availability of adequate financial resources** to develop necessary implementation capacity and support the delivery of Triple P,

(2) **Ensuring adequate time and space** to reasonably expect implementation and scale-up to translate into population-level outcomes, and

(3) **Setting expectations and resources for quality and outcome monitoring** of Triple P across all levels of the Triple P system.

When funding comes from state agencies, they may also play a supportive role in coordinating state-level learning collaboratives, statewide implementation support teams, and statewide intervention components (e.g., media-based intervention components).

Triple P America

Triple P America is the U.S.-based purveyor of Triple P training, materials, and implementation support. Recently, Triple P International published the Triple P Implementation Framework (TPIF), which details their role in supporting Triple P implementation and sustainability.[83] TPIF details five phases of activities between Triple P America and local service systems adopting Triple P interventions.

(1) **Engagement**: Initial interactions with community stakeholders to explore if Triple P is a good fit for their goals and community needs.

(2) **Commitment and Contracting**: Confirmation of the scope of Triple P implementation and facilitation of written agreements for training, resources, and support.

(3) **Implementation Planning**: Collaboration on creation of an implementation plan, including plans for communications, training and accreditation, service delivery, quality assurance, and evaluation.

(4) **Training and Accreditation**: Delivery of standardized training and accreditation process for practitioners.

(5) **Implementation and Maintenance**: Engagement in feedback cycles with community stakeholders around service delivery, quality improvement, ongoing development, and sustainability mechanisms.

Across these five phases, Triple P America helps to support **practitioner professional development to deliver Triple P interventions as intended**, **assure quality**, **enable outcome monitoring**, and **contribute to the development of local implementation capacity** needed to support and improve local Triple P implementation.

Intermediary organizations

Intermediary organizations differ from program purveyors in that they support the dissemination and implementation of more than one evidence-based program or practice and, as such, have a more expanded role than program purveyors.[84] As defined by Mettrick and colleagues[85] (p. 3), an intermediary organization:

> "Supports service array development through implementation technical assistance, creative financing options, training, coaching, education, continuous quality improvement monitoring, and outcomes evaluation.
>
> [An intermediary organization] connects providers, state agencies, local jurisdictions, and purveyors to ensure that effective implementation leads to improved outcomes and builds on existing systems reform efforts."

Because intermediary organizations are often more regionally located to implementation sites compared to the national or international presence of program purveyors, they are able to serve several unique functions. Through their recent Center of Excellence Learning Community funded by the Annie E. Casey Foundation, Mettrick and colleagues[85] detail five core functions for intermediary organizations:

(1) **Implementation support for evidence-based programs**;

(2) **Research, evaluation, and data linking capacity**;

(3) **Partnership engagement and collaboration**;

(4) **Workforce development activities** (including training and coaching); and

(5) **Policy and finance expertise**.

Intermediary organizations do not replicate the role of state agencies or program purveyors, rather they work in concert with state agencies, funders, and program purveyors to support the achievement of common goals. Where functions or activities overlap among any co-creation partners, developing clear agreements about roles and how to support synergistic, rather than contradictory work patterns, becomes essential.

The NCIC-TP team is working to identify and build the capacity of an intermediary organization or partnership of common organizations to support Triple P system implementation in North Carolina.

Local community members

Local community members, including the children, youth, and families receiving services, play essential roles in the successful and sustainable implementation of evidence-based interventions, particularly at scale. Respondents in the TPIE-Qualitative evaluation identified that local community members were particularly helpful by:[51]

(1) **Providing feedback and supporting continuous quality improvement** of Triple P delivery at agency, county, and state levels;

(2) **Catalyzing Triple P engagement within their communities** by word-of-mouth advertising, sharing positive experiences, and transferring learning and parenting skills to other community parents and stakeholders;

(3) **Championing Triple P** with local, county and statewide stakeholders; and by

(4) **Fully participating in Triple P implementation structures**, such as decision-making bodies that select which Triple P programs to adopt locally.

In addition, Boothroyd and colleagues[86] detail five functions that active, involved partnerships between local service systems and community members can support during implementation and scale-up:

(1) **Listening to learn about and begin to address historical trauma** (historical maltreatment of families in key communities identified by cultural factors such as race or income level), mistrust of agencies and systems, and other long-standing and institutional barriers to safety, health, and wellbeing;

(2) Working with community members to **identify system barriers** to improved outcomes for children and families and implement action plans to address those barriers;

(3) Collaborating with community members to **establish culturally relevant supports and services** to meet the underlying needs of children and families;

(4) Meaningfully **involving community members in practitioner professional development activities and community design teams** for effective, sustained implementation; and

(5) **Ensuring partnership meetings, forums, and feedback loops are sustained** so that community members are continuously connected to and help guide ongoing practice and system changes.

Participants in TPIE-Qualitative suggested that, overall, there is a need for more actively and purposefully involving community members in local Triple P implementation activities and decision-making.[51]

Triple P developers & researchers

Finally, Triple P developers and researchers have both proactive and reactive roles relative to the implementation and scale-up of Triple P. Proactively, Triple P developers need to ensure that **Triple P programs and strategies are usable within community prevention systems.**[12,21,87,88] Interventions that meet usability criteria are regarded as teachable, learnable, doable, repeatable, and assessable in practice.[87,88] Triple P researchers also have a key role to ensure that **Triple P programs and media strategies are and remain evidence-based**. This was one of the most widely identified roles of Triple P researchers during the TPIE-Qualitative evaluation.[51] As identified in TPIE-Qualitative, Triple P researchers also have ongoing roles around **making the Triple P evidence-base accessible and usable** to local implementation stakeholders and for **using naturally occurring implementation efforts as opportunities to test effective implementation strategies related to Triple P**.

Providing Implementation Support to NC Counties Scaling Triple P

While all co-creation partners have essential roles in the implementation and scale-up of Triple P, providing active implementation support directly to system stakeholders is a core function particularly related to Triple P America and intermediary organizations. These *direct implementation support providers* are a primary mechanism for contributing to the development of local implementation capacity and performance.

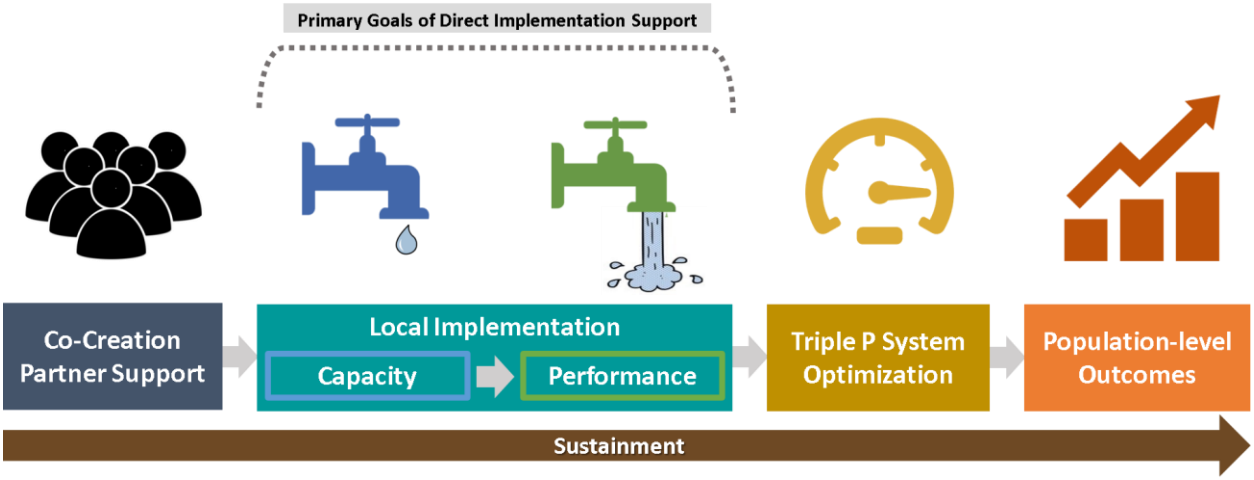

Figure 3. Direct implementation support role and goals.

The logic model for Triple P implementation (see a short-handed version in Figure 3) reminds us that capacity without performance denies the possibility of implementation optimization and the realization of child and family outcomes. Likewise, performance without adequate capacity may result in temporary, inefficient, and suboptimal outcomes. One helpful way to think about this is that both the pipeline (implementation capacity) and the water flowing through the pipeline as intended (implementation performance) are essential. As such, although there are seven objectives of implementation support articulated in the first section of this plan, **the primary goals of direct implementation support providers – such as Triple P America and intermediary organizations – are meaningful contributions to the development of strong local implementation capacity and performance**. *Strong local capacity and performance offer the foundation on which the realization of other implementation support objectives and local Triple P system optimization goals can be most effectively and sustainably achieved.*

Triple P America and intermediary organizations join the multi-level system of support that is already developing across North Carolina for the scale-up of Triple P (see Figure 4). The State Triple P Learning Collaborative and local leadership and implementation teams within community Triple P coalitions work as *internal* change agents in this multi-level system of support; they work from within state and county service system environments to develop Triple P implementation capacity and performance. In contrast, Triple P America and intermediary organizations act as *external* change agents; they work from outside state and county service system environments to support the development of implementation capacity and performance.[1,65,89]

Carefully designed, proactive, and ongoing implementation support from external change agents has been identified as a key component for achieving system-level impact, and is considered most effective when it contextualizes implementation strategies for local systems and works at multiple levels.[17,57-70] The following sections offer details about the alignment of support from Triple P America and intermediary organizations and a flexible, stage-based approach to the use of core practice components for external implementation support to strengthen Triple P implementation capacity and performance in NC communities.

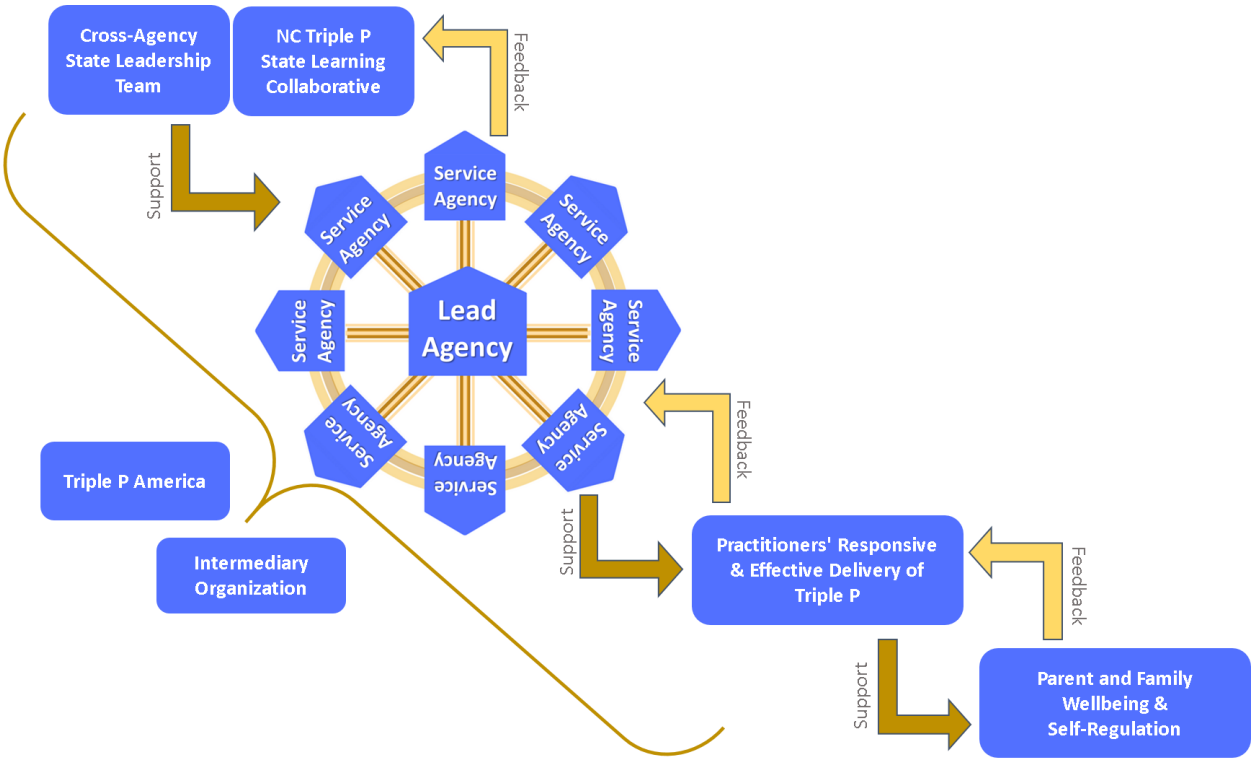

Figure 4. TPA and Intermediary Organization integration into North Carolina's multi-level system of Triple P implementation support.

Alignment of Support among Triple P America & Intermediary Organizations

Figure 5 presents an integrated model of implementation support, aligning more *generic* local implementation processes (i.e., not program specific) with the phases of the Triple P Implementation Framework (TPIF).[83] Intermediary organizations and Triple P America may work in concert to support the blend of generic implementation processes and Triple P-specific implementation processes. For example, during the exploration stage,[12,27] lead agencies in NC communities and their partners will benefit from assessing community wellbeing needs and community system members' readiness to implement practice or program changes. These generic implementation processes may be supported by intermediary organizations as needed. Once needs and readiness for implementation are clarified, contact may begin between the lead community agency and Triple P America (TPA) to assess the *fit* of Triple P with identified community needs and local readiness (i.e., the *engagement phase* of TPIF). If a decision is made to move forward, the organizations develop written agreements for training and other support

from TPA (i.e., the *commitment and contracting* phase) and then progress to the *implementation planning* phase, during which an intermediary organization may also be involved for co-creation. Additional examples of an integrated approach to supporting generic and Triple P-specific implementation activities are provided in Table 1.

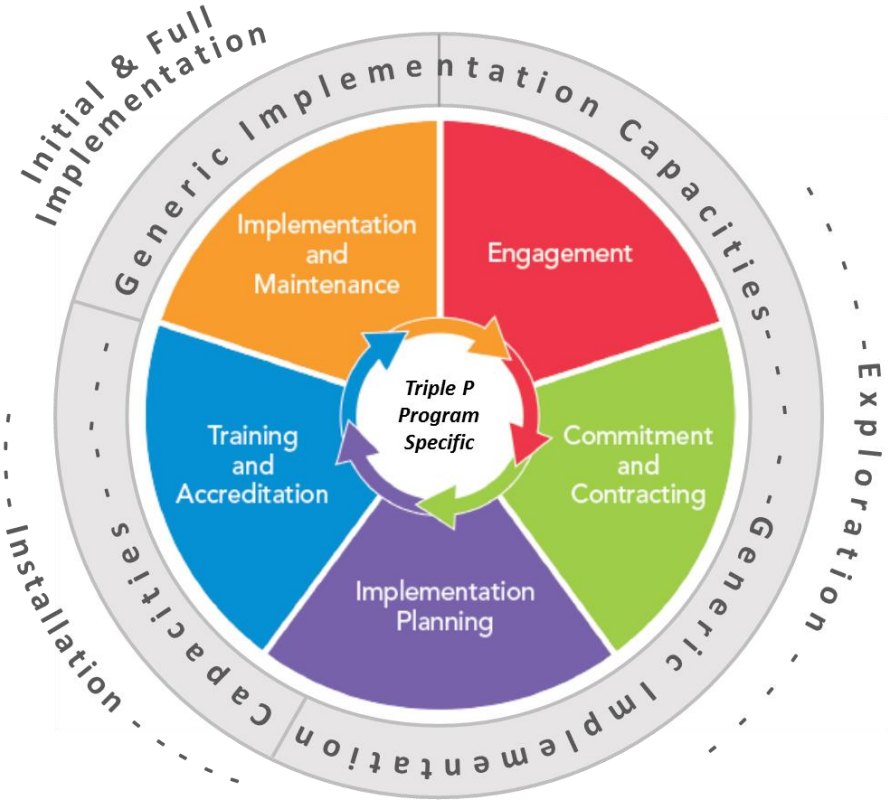

Figure 5. Aligning Triple P specific and more generic implementation support.

With attention to both Triple P-specific and generic implementation capacities, external providers of implementation support take a building-block approach across stages of implementation to strengthen individual and organizational abilities for the effective use of Triple P. Of course, *though stages are helpful for conceptualizing the implementation process, implementation and scale-up are widely recognized as dynamic, nonlinear processes involving multiple decisions, not a single event that occurs over time*. Triple P America and intermediary organizations need to be proficient at handling the complex entanglement of natural implementation processes.

	IMPLEMENTATION STAGES[12,27] and EXAMPLE ACTIVITIES			
	Exploration	**Installation**	**Initial Implementation**	**Full Implementation**
Generic Implementation Activities	• Assessing community wellbeing needs • Assessing system readiness to implement change • Assessing current system implementation capacity, and planning to strengthen gaps and manage challenges • Setting up leadership and implementation teams	• Professional development to use and support active implementation strategies • Community coalition capacity development of implementation infrastructure (e.g., practitioner selection, training, coaching systems; local quality and outcome monitoring systems; linking communication protocols)	• Identifying and addressing adaptive implementation challenges • Strengthening coalition and multi-level systems environments • Using process and outcome data to improve overall implementation capacity and performance	• Institutionalizing overall implementation capacity and performance • Local coalition-regulation of ongoing implementation and program optimization • Consideration of how to align or add additional evidence-based programs and practices to meet community goals
Triple P-Specific Implementation Activities	• Clarifying potential fit for Triple P (e.g., target population, workforce) • Clarifying capacities needed for chosen Triple P levels, formats, and goals	• Receiving high-quality Triple P training • Meeting Triple P accreditation standards • Establishing Triple P peer support networks (PASS Model that builds collective regulation)	• Facilitating access and engagement for Triple P family services • Delivering Triple P programs to families • Evaluating Triple P delivery and refining practices • Using data to improve organizational support for implementing Triple P	• Building linkages across Triple P levels and organizations • Sustaining service delivery and support processes • Examining and enhancing population-wide impact

Table 1. Examples of generic and Triple P-specific implementation activities and supports by stages.

A Stage-Based Approach to Supporting the Scale-up of Triple P in NC Communities

Aldridge, Brown, and Bumbarger have proposed a *core set of practice components for external implementation support*.[1] Similar to the need to flexibly draw on identified implementation strategies,[90-92] core practice components of implementation support might be differentially used across stages of implementation. Aldridge et al.'s arrangement of practice components by *stage of implementation support* is presented in Figure 6.[27] When core practice components are flexibly yet intentionally used over time, external implementation support offers gradual and ongoing contributions to strengthen local implementation capacity and performance while ensuring local system ownership of the process.

Although Triple P America's implementation consultants utilize many of these core practice components, in the sections that follow we discuss the necessary incorporation of these practice components for external implementation support within the stage-based activities of intermediary organizations and NC community Triple P coalitions as they work together to scale the Triple P system. Recommended implementation support tools and measures of formative and summative implementation outcomes are presented in appendices I-III, and will be included in separate resource materials and made available on the NCIC-TP website (http://ncic.fpg.unc.edu) as finalized.

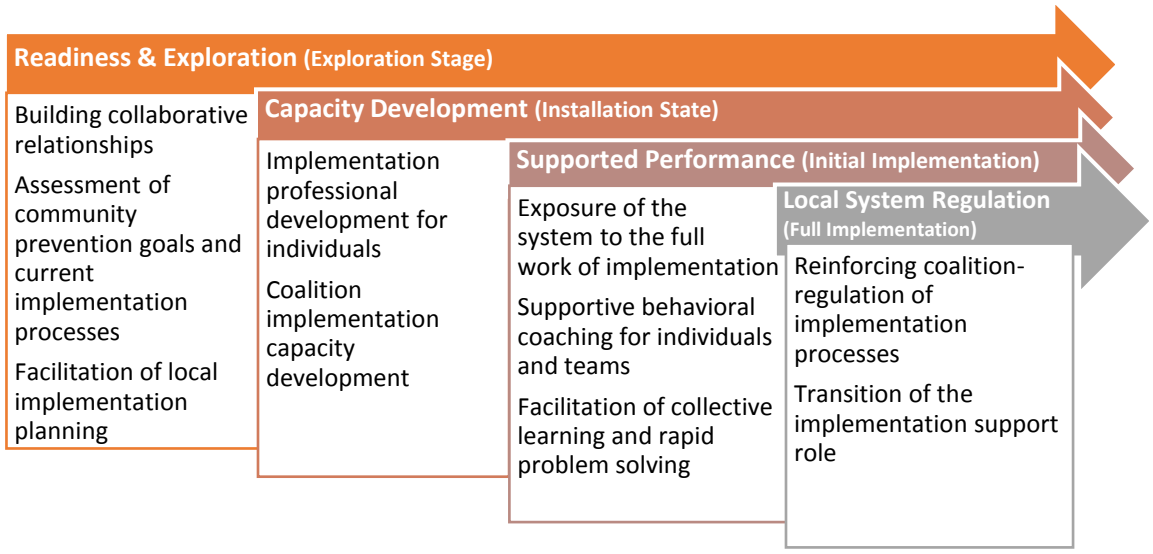

Figure 6. Implementation support core components by stages of implementation support.[1]

Readiness & Exploration

Creating ongoing opportunities for readiness and exploration work within communities intending to or already scaling-up Triple P was a key recommendation from county and statewide Triple P stakeholders who participated in TPIE-Qualitative.[51] High quality readiness and exploration processes have been associated with greater implementation success and efficiency in later stages of implementation,[93] including for Triple P.[94]

If not already completed, some intermediary organizations may be able to support community leaders with local needs assessments, which will ground discussions about the adoption of Triple P in local health and wellbeing data and set-up key indicators of population-level success that may be monitored over time. Additionally, Triple P fit and feasibility with local community needs and coalition partners should be considered, collaboration between co-creation partners must be reinforced, local leaders' sense of change commitment and change efficacy with Triple P needs to be gauged, and resources and supports required to sustainably scale the Triple P system should be determined. Tools and measures that can support these activities are presented in Appendices I-III.

Once readiness has been established and decisions made to move forward with Triple P and external implementation support partners, three core practice components for external implementation support are essential for intermediary organizations as they support the creation of a local foundation for Triple P success: (1) *building collaborative working relationships*, (2) *assessment of community prevention goals and current implementation processes*, and (3) *facilitation of the community coalition's implementation planning*.

Building collaborative working relationships. The development of collaborative relationships between providers of external implementation support and local system stakeholders has been one of the most widely discussed factors in relation to high quality implementation support.[17,57-59,62-64,70,89,95-97] In particular, Katz and Wandersman propose seven relationship characteristics that are important between providers of external implementation support and support recipients: *trust, respect, collaboration, adjusting to readiness, strengths-based, autonomy-supportive,* and *rapport*.[58]

Intermediary organizations need to proactively foster such relationship characteristics with community Triple P coalitions and their co-creation partners. In part, this can be facilitated early by collaborative conversations about, and assessments of, community prevention goals and strengths and needs of coalition implementation practices. During these conversations, intermediary organizations can reinforce and build on existing strengths and be transparent about how they can, and cannot, be helpful to community Triple P coalitions. Where coalitions may have needs with which the intermediary organization cannot help, brokering connections with new co-creation partners or resources can add value to the relationship.[57] Additionally, social interactions between collaborative partners, such as periodic social meetings and other events that bring people together (often around food), are cited as essential intangibles necessary to nurture connections on which social change efforts may rely.[13]

Assessment of community prevention goals and current implementation processes. Collecting data about local goals and capacity allows providers of external implementation support to accommodate communities' needs and resources in a way that recognizes current progress and enables a strengths-based approach.[58] During exploration-stage assessment activities, several discussion protocols and assessment instruments related to local implementation capacity and performance may be helpful and are presented in Appendices I-III. The importance of using

specific assessments of need to tailor implementation support and implementation planning, rather than relying only on *global* assessments, has been documented in the context of advancing community-wide prevention efforts.[96] *It is strongly recommended that intermediary organizations and coalition leaders incorporate specific measures of implementation capacity and performance and not rely solely on discussion tools or other global inquiry protocols.*

Facilitation of the community coalition's implementation planning. In preparation for the next stages of implementation, Triple P America, intermediary organizations, and community Triple P coalition leaders will benefit from the development of a local implementation plan, grounded in identified community strengths and needs and guided by strategic, evidence-informed strategies for implementation and scale-up. Because of the technical nature of these plans and the likely benefits of community Triple P coalition leaders to be supported during their development, intermediary organizations and Triple P America, working in partnership, may facilitate the generative process. Local implementation plans may include details related to several features of the NCIC-TP implementation support logic model (see Figure 1, above), such as:

- Target goals for, and plans for measuring and monitoring, local **population-level outcomes**;
- Target goals for, and plans for measuring and monitoring, **Triple P system implementation outcomes** (e.g., fidelity, reach, accessibility, system alignment);
- Plans for the development of **local implementation capacity** and the **local implementation performance** needed to meet target goals for Triple P delivery and population-level outcomes (i.e., linking leadership and implementation teams within the community coalition and their alignment within the state's multi-level system of implementation support; professional development infrastructure; quality and outcome monitoring systems; and media and networking capacity); and
- Plans for involving **co-creation partners** to support and participate in the development of local implementation capacity and overall coalition sustainability.

The implementation plan should establish a clear, direct connection between the Triple P system's underlying logic model or theory of change and the benchmarks that signify high-quality Triple P delivery across a community. Furthermore, several supporting implementation, practice, and policy resources (e.g., MOUs, data-sharing plans, peer support network plans, fidelity monitoring plans, local Triple P Stay Positive media campaign plans) may be acquired and adapted from the North Carolina Triple P Learning Collaborative or may otherwise need to be developed as a result of the local implementation plan.

Local implementation plans also allow intermediary organizations to develop their thoughts for responsively supporting community Triple P coalitions. In this way, *external implementation support plans* can likewise be developed, informed by identified strengths and needs in community implementation capacity and locally established implementation goals. Through discussion with community Triple P leaders, intermediary organizations can select a series of

professional and coalition capacity development strategies that may best fit local team structures, needs, and preferences for external implementation support.

As a core part of the implementation planning process, the **community Triple P implementation team** should be formally identified. This team is often the ongoing point of connection for intermediary organizations and Triple P America Implementation Consultants to support Triple P implementation and scale-up in the community. Community Triple P implementation teams, often led by one or two Triple P coordinators, are responsible for day-to-day support of the community Triple P coalition and its member service agencies. Among other activities, at least a portion of the team may assure day-to-day functions for active implementation and scale-up at the coalition-level, including:[8]

- **Assessing and creating ongoing buy-in and readiness** within and across Triple P service agencies and community prevention systems;
- Installing, ensuring the aligned operation of, and sustaining **cross-coalition implementation infrastructure** and best practices to support Triple P delivery;
- Developing and implementing **coalition-level action plans** to manage stage-based work;
- **Ensuring the use of data**, including Triple P fidelity and outcome data, within service agencies and across the community Triple P coalition **for continuous quality and outcome improvement**;
- **Involving key partners and community members**, including the children and parents being served, in Triple P implementation support activities and decision-making for community system improvement;
- Organizing and directing the **day-to-day flow of information** across the coalition and, as needed, to the North Carolina Triple P Learning Collaborative to support local Triple P implementation and scaling; and
- Identifying and **addressing coalition implementation barriers** and ensuring the **spread of solutions** across the coalition to support successful Triple P implementation and scaling.

Although implementation team structures may vary according to local context and resources, at their core, implementation teams may benefit from:

- being **real, organizationally recognized teams**;[15]
- having **at least three members** (though observations from TPIE suggest that community coalition Triple P implementation teams may benefit from as many as four to seven members with 3.0+ FTE dedicated across the team including at least one or two full time coordinators);[8,12,27,50,98] and
- having the following experiences and embedded team competencies:[8,12]

- **experience creating and managing systems changes**, informed by data, to support the implementation and scale-up of an innovation;
- **fluency with Triple P** and quality benchmarks for Triple P implementation and scale-up across a community coalition; and
- **fluency with the use of evidence-informed, active implementation strategies**.

Embedding a **local evaluator** or **data manager** within the coalition implementation support team may also be of benefit, and is being done in several Triple P coalitions across the state.

More broadly, the community Triple P implementation team may work in partnership with **community Triple P coalition leadership**, which should also be clearly identified as a core part of the implementation planning process, to support collective impact backbone functions on behalf of the community Triple P coalition, including:[13]

- Providing overall **strategic direction**,
- **Facilitating dialogue** between partners,
- **Managing data** collection and analysis,
- Handling **communications**,
- Coordinating **community outreach**, and
- **Mobilizing funding**.

Observations from TPIE evaluation results and feedback from cross-system partners during TPIE-Qualitative greatly suggested the importance of strong community Triple P coalition leadership and implementation teams for local success.[50,51]

In conclusion, it should be recognized that although *all co-creation partners* have a role in supporting the time, space, and resources needed for a robust exploration process, intermediary organizations may be uniquely positioned to reinforce these activities and, in doing so, create more effective and efficient engagement processes for other co-creation partners involved.

Capacity Development

Following the exploration process, intermediary organizations partner with community Triple P coalition leaders and implementation teams to strengthen local implementation capacity through strategies mutually established during the exploration process. Two core practice components for external implementation support may be essential for intermediary organizations during this stage: (1) *professional development for individuals to utilize effective implementation strategies*, and (2) *community Triple P coalition implementation capacity development*.

Professional development for individuals to utilize effective implementation strategies. Intermediary organizations contribute to the professional development of local Triple P leaders

and implementation team members so they can confidently support the implementation and scale-up of Triple P using active implementation strategies. Recent evidence suggests that when community coalition members better understand models of evidence-based program support within community coalitions, they may better support evidence-based program delivery with fidelity.[10] Professional development needs may vary between community Triple P coalition leaders and implementation teams. For example:

- **Community Triple P coalition leaders** may need to reinforce their adaptive leadership skills, strengthen resources for engaging community members in local implementation activities, develop understanding of common barriers and facilitators to the successful scale-up of Triple P, and have a clear understanding of how to ensure that community Triple P coalition policies and practices are in alignment with evidence-informed implementation practices.
- **Community Triple P implementation team members** may need to develop skills related to increasing coalition partners' readiness and buy-in, know the intricacies of installing implementation infrastructure across the community coalition, have fluency in Triple P interventions and active implementation strategies, and be skilled in managing action plans and local evaluation and improvement systems.

In addition, needs may vary within groups of local Triple P leaders or implementation team members, necessitating adaptive professional development strategies that support a range of prior experience and knowledge.

To support professional development in active implementation for individuals, intermediary organizations may draw from the broad array of implementation science frameworks available in the research or professional literature. However, sticking to one or two frameworks for consistency of messaging and terminology may facilitate learner development. NCIC-TP largely refers to the Active Implementation Frameworks[12,27] and their related literature, as well as to the literature about community-wide scale-up of evidence-based prevention programs (e.g., Communities that Care, PROSPER, Getting to Outcomes, and Collective Impact). In addition to the relevance of these literatures to the Triple P Implementation Framework,[83] these literature bases greatly informed the development of the NCIC-TP Implementation Support logic model and will inform NCIC-TP tool and resource development.

Regardless of the literature or frameworks chosen, intermediaries have a responsibility to ensure their local usability. This means that implementation science knowledge and skills should be teachable, learnable, doable, repeatable, and assessable in practice[87] as well as locally responsive and relevant.

Community Triple P coalition capacity development. Across the four areas of local implementation capacity described in the NCIC-TP Implementation Support Logic Model (refer back to Figure 1), intermediary organizations may contribute to the development of organizational and team structures, resources and abilities, and policies and practices to support implementation.

Leadership & Implementation Teams. As discussed throughout this plan, leadership and implementation team structures, linked within and across levels of community service systems,

are considered and have been demonstrated to be key features of evidence-based program implementation and scale-up.[2,4,6-20] *To link leaders and teams across community service systems*, **the formation of community coalition structures**, which may utilize lead or backbone organizations to support well-defined local service agency collaboratives that share resources and address common goals, has been utilized as a key strategy.[2,14,19,20,99,100] Recently, the emergence of the collective impact literature has offered key principles for cross-sector community collaborations.[13,101-103] Coalition-based approaches to the scale-up of Triple P may also provide a good way to ensure opportunities for cross-agency interaction and support, which was suggested as an important factor for successfully supporting the scale-up of Triple P by cross-system respondents in TPIE-Qualitative.[51]

Intermediary organizations, in consultation with Triple P America as needed, may work with community Triple P coalition leaders and implementation teams to contribute to the design and documentation of coalition principles and practices, support the development of backbone organization capacity[13,102] within the lead agency, and develop and utilize criteria for the selection of local service agencies to participate in the Triple P coalition.

Beyond the organization and expansion of coalition structures to support communitywide Triple P scale-up, **formalizing Triple P coalition leadership and implementation teams** identified during the readiness and exploration stage, **organizing Triple P *service agency* leadership and implementation teams** as agencies join the coalition, and **linking these teams together** across the coalition structure may be important during this stage of support.[12,14,17,27] TPIE results indicated that more fully developed and linked leadership and implementation teams within Triple P service agencies were significantly associated with agency continuation of Triple P implementation during the two-year evaluation period.[50] Tools and measures relevant to these activities are detailed in Appendices I-III.

Practitioner professional development infrastructure. Professional development infrastructure to support coalition Triple P practitioners to sustainably deliver Triple P interventions with fidelity and appropriate flexibility includes the following:[5,8,27]

- **Practitioner recruitment and selection infrastructure**. Intermediary organizations may work alongside Triple P America and coalition leadership and implementation teams to establish policies and practices for recruiting and/or selecting community service practitioners to deliver Triple P programs. Practitioner selection criteria may vary across Triple P programs. Regardless, formalizing clear coalition policies and practices that integrate implementation best practices for this core implementation component may support more successful and sustainable selection outcomes.

  Results from TPIE indicated that selecting only one Triple P practitioner within an agency dramatically increased the risk that the agency would not continue to support Triple P over time.[50] Agencies that continued implementation across TPIE's evaluation period had, on average, *over three Triple P practitioners*. This sort of clustering of practitioners is also reflected in other implementation science literature.[98] These findings did not pertain to independent or solo practitioners (often therapists in private practice).

Regardless, coalition policies and practices might reflect clustering in an effort to ensure that a sufficient number of Triple P practitioners are selected and maintained within service agencies to support sustainment of Triple P implementation.

- **Practitioner Triple P training infrastructure**. Triple P America plays a strong role in training community service practitioners to deliver Triple P. However, intermediary organizations may work alongside Triple P America and Triple P coalition leadership and implementation teams to establish coalition policies and practices that align with, and reinforce, Triple P America's training practices.
- **Triple P practitioner coaching infrastructure**. Triple P's model of ongoing practitioner coaching following Triple P accreditation requires laying infrastructure for coalition and/or agency peer support networks. Triple P's Peer Assisted Supervision and Support (PASS) model offers principles and practices to ensure that peer support networks are sufficient to expect intended coaching outcomes for Triple P practitioners.

  Intermediary organizations may work alongside Triple P America and coalition leadership and implementation teams to lay the infrastructure for Triple P peer support networks. Alternate coaching infrastructure that integrates implementation best practices might need to be considered in addition to or instead of peer support networks if feasibility or appropriateness concerns arise with the PASS model.

  Results from TPIE suggested that infrastructure to support Triple P practitioners' ongoing coaching following accreditation was the area *most in need of development* across participating counties.[50] Practitioners' ongoing receipt of coaching following accreditation may be particularly important to sustain the reach of Triple P interventions within a community (by increasing the likelihood that practitioners will actually deliver Triple P) and to support the delivery of Triple P interventions with fidelity.[22,26,29,32,104]

Quality and outcome monitoring systems. Quality and outcome monitoring systems to support implementation and practice improvement across community Triple P coalitions include the following:[5,8,27]

- **Fidelity assessment infrastructure**. The delivery of programs with fidelity has consistently been linked to increased likelihood of program outcomes.[2,77,78,105,106] However, the measurement and achievement of program fidelity in applied settings has often been challenging.[36,41,107,108] Evidence from TPIE does not suggest otherwise: results indicated that infrastructure to support Triple P fidelity assessment was in particular need of development across participating counties.[50]

  Intermediary organizations may work alongside Triple P America, Triple P researchers and program developers, and Triple P coalition leadership and implementation teams to ensure the availability of practical fidelity assessment instruments for use in community service settings and to establish coalition policies and practices that align with, and reinforce, Triple P America's quality assurance practices.

- **Decision support data systems**. Using data to continuously improve implementation and program delivery may lead to higher quality services, greater likelihood of intended outcomes, and program sustainability.[37,40,109] Diagnostic and evaluative capacity is a necessary component of engaging in data-based improvement activities.[42] Although results from TPIE indicated that decision support data system infrastructure was in strong shape at coalition-levels in participating counties (likely due to requirements for participation in the state Triple P evaluation), results simultaneously suggested that additional development of decision-support data system infrastructure was needed across Triple P service agencies.[50]

  Intermediary organizations may work alongside Triple P America and Triple P coalitions to identify key data constructs that will be important for decision-making and performance improvement; develop practical data collection, analysis, and reporting protocols; develop policies and practices that reinforce the use of data among leadership and implementation teams for decision-making and improvement; and ensure that data coalition and evaluation processes align with state Triple P evaluation and funder requirements. Consideration of both implementation outcomes and population-level outcomes, as described in the final elements of the NCIC-TP Implementation Support Logic Model (refer to Figure 1, above), may be important.

- **Leadership and implementation teams & practice-policy communication cycles**. Although the development of leadership and implementation teams has already been discussed, it is important to note their relevance to two other core implementation components for quality and outcome improvement: **facilitative administration** and **systems intervention**.[5,27] Facilitative administration practices relate to the use of information about agency/coalition policy and practice facilitators and barriers to improve the implementation of Triple P. Systems intervention practices relate to the use of information about Triple P successes and larger systems needs to improve and sustain the implementation of Triple P. In this way, they are flip sides of the same coin: changing *internal* policies and practices (facilitative administration) vs. influencing *external* environmental contexts and *external* systems policies and practices (systems intervention). Linking leadership and implementation teams together with front-line practitioners and with external policymakers to create **practice-policy communication cycles** is an important part of developing capacity for facilitative administration and systems intervention practices.

  Although results from TPIE indicated that facilitative administration and systems intervention infrastructure was in good-to-strong shape at coalition-levels in participating counties (possibly aided by coalition-based approaches), results simultaneously suggested that additional development of facilitative administration and systems intervention infrastructure was needed across Triple P *service agencies*.[50] Intermediary organizations may work alongside Triple P America and coalition leadership and implementation teams to ensure that infrastructure and best practices for facilitative administration and systems intervention are embedded at all levels.

Media and networking capacity. As previously mentioned, developing media and networking strategies to mobilize knowledge and behavior change appears to be an important factor in achieving population-level outcomes.[14,43-49] The Triple P system is unique in that it offers **Stay Positive media strategies** that can be adopted, combined into a local media campaign, and strategically deployed within community social networks to:

- Increase the visibility, accessibility, and reach of Triple P in the local community;
- Offer normative information about child development;
- Destigmatize the need for parenting support; and
- Introduce social learning and modeling opportunities into the community at scale.

Intermediary organizations may work alongside Triple P America, statewide Stay Positive media supports, and Triple P coalition leadership and implementation teams to strategically develop and implement a local Stay Positive media campaign based on community preferences, demography, geography, social networks, and other characteristics.

Social networking analysis techniques can be helpful in mapping the social networks of community Triple P coalition members to inform strategic placement of Stay Positive media strategies and accelerate word-of-mouth dissemination of Triple P information. Valente and colleagues[49] describe and provide some simple measures of social networks that can be used to monitor and improve social networks in the local community.

In conclusion and across all areas of community Triple P coalition capacity development, it is important to note that partnerships and regular communication with the North Carolina Triple P Learning Collaborative and statewide funders will help ensure the alignment of local implementation capacity and measurement efforts with statewide Triple P system activities.

Supported Performance

As community Triple P coalitions' implementation capacities are strengthened and they begin to apply their resources and abilities to deliver Triple P programs across the community, intermediary organizations may serve coalitions well by closely supporting initial performance efforts. In fact, the initial implementation stage is often referred to as the "awkward stage" because new system behaviors often come into conflict with longstanding system habits and adaptive challenges become fully apparent in the midst of the push to perform.[110] Three core practice components for external implementation support may be essential for intermediary organizations during this stage: (1) *exposure of the coalition to the full work of implementation*, (2) *supportive behavioral coaching for individuals and teams,* and (3) *facilitation of collective learning and rapid problem solving*. More than any other practice components of implementation support, these three must work in close concert.

Exposure of the coalition to the full work of implementation. During the stage of supported performance, it becomes important for community Triple P coalition leaders and implementation teams to fully test out their new resources and abilities to support Triple P implementation and

scale-up. The tendency for coalition leaders and members to fall back into familiar, longstanding, and often insufficient implementation habits and fragmented systems practices can be great, particularly as comfort with new practices and partners remains emergent. But leaning on newly organized coalition resources and abilities as the adaptive work of implementation and scale-up escalates can provide essential opportunities for individual and collective learning. These learning opportunities and collective risk-taking are essential to identifying areas of required improvement and sufficiently sustaining system change.[57] Intermediary organizations need to help motivate staff from all levels of the coalition – and co-creation partners – to fully lean into the discomfort of new ways of work that were established during the capacity development stage of implementation support.

Supportive behavioral coaching for individuals and teams. As community Triple P coalition leaders and implementation teams fully engage in the practice of Triple P implementation and scale-up, intermediary organizations can support competent implementation practices and nurture confidence by providing supportive behavioral coaching.[63,70,95] Intermediary organizations take on the responsibility for ensuring that implementation and scale-up work moves forward without the coalition or its members becoming overwhelmed or losing their collective sense of efficacy.[110]

Chilenski and colleagues[70] describe the use of "an empowerment approach that includes asking open-ended questions which encourage [team leaders and members] to critically reflect on their knowledge and experience, encouraging teams to brainstorm pros and cons when assessing solutions to the many challenges that they will face, providing positive yet constructive feedback, helping the team leader and team set realistic goals, and encouraging team-centered accountability" (p. 26). Eiraldi and colleagues[95] note the importance of directly observing local implementation processes to provide personalized feedback and problem solving. Similarly, Ray and colleagues[61] found that on-site coaching was particularly important, as external providers of implementation support had difficulty achieving skill change and improvement via phone or email communications. This core practice component for external implementation support is a parallel process to coaching practitioners' delivery of new front-line programs and practices, which has been found to increase the use and quality of innovation delivery.[22,26,28-34]

Facilitation of collective learning and rapid problem solving. Finally, intermediary organizations can support community Triple P coalition leaders and implementation teams in this stage of implementation support by facilitating collective learning and rapid problem solving.[17,57,63,95,111] Triple P America Implementation Consultants also may play an important, program-specific role in these activities, since barriers and challenges may arise related to either the Triple P system or to the implementation strategies being used to support the Triple P system. Intermediary organizations may facilitate problem solving by connecting Triple P coalition leaders and implementation teams with Triple P America Implementation Consultants or other outside knowledge or supports.[57] Alternatively, internal problem solving can be facilitated by the use of Plan-Do-Study-Act (PDSA) and other continuous quality improvement cycle techniques.[57,61,65,73,110] Intermediary organizations may help Triple P coalition implementation teams design and implement PDSA cycles and may provide coaching on the PDSA process, though

accountability for learning and problem solving needs to reside within the local coalition itself to support local ownership of progress.

Local Coalition-regulation

As community Triple P coalitions' implementation performance stabilizes and intended implementation and program outcomes begin to appear, intermediary organizations may begin to consider tapering their support. Two core practice components may be essential for intermediary organizations during this stage: (1) *Reinforcing coalition-regulation of implementation processes* and (2) *transition of the implementation support role*.

Reinforcing coalition-regulation of implementation processes. During this stage of implementation support, coalition leaders and implementation teams should be expressing a decreased need for intensive support from intermediary organizations and be ready to locally manage the continual improvement of their implementation structures and processes. Sanders and Mazzucchelli[112] detail five key elements of parent self-regulation hypothesized to be built through Triple P interventions: self-management tools, self-efficacy, personal agency, self-sufficiency, and problem-solving. Here we reframe these principles as *coalition-regulation* principles that can be nurtured by intermediary organizations throughout all stages of their engagement with community Triple P coalitions, but should be particularly reinforced during this last stage:

- **Collective-management tools**: During earlier stages of implementation support, intermediary organizations may have contributed to the development of coalition team structures, protocols (e.g., professional development plans, data plans, communication protocols), measures, and other tools to support local management of Triple P implementation and scale-up. In this final stage of support, intermediary organizations need to reinforce the ongoing integration and use of these collective-management tools by coalition leaders and implementation teams. Intermediary organizations should also encourage coalition leaders and implementation teams to regularly update related documents, such as team terms of reference, in the case of system or staff changes.
- **Collective-efficacy**: Mentioned earlier in relation to the practice principle *local ownership of progress*, collective-efficacy represents coalition leaders' and implementation team members' perceptions of their collective abilities to use new implementation structures and practices to attain desired implementation outcomes. Reinforcing coalition leaders' and implementation team members' sense of collective-efficacy during this final stage of implementation support can enable them to confidently work together to continue to make progress and improvement in community prevention and wellbeing efforts.
- **Collective agency**: Intermediary organizations may also reinforce coalition leaders' and implementation teams' sense of collective agency in determining local Triple P goals and improving local implementation capacity and performance to reach those goals. This ensures that coalition leaders and implementation teams take responsibility for, feel ownership of, and have influence over the actions that support coalition changes and

implementation practices. It also facilitates intermediary organizations' transition away from an intensive support role.

- **Collective-sufficiency**: Reinforcing coalition leaders' and implementation teams' collective-sufficiency during this stage *does not mean* increasing their isolation from support. Instead, coaching during this time can focus on reinforcing coalition leaders' and implementation teams' membership within larger support networks, and enable them to independently solve problems *with ongoing support* from intermediary organizations and other co-creation partners as needed.
- **Adaptive problem solving**: By building adaptive leadership skills with coalition leaders and implementation team members, intermediary organizations inherently reinforce adaptive problem solving, which by definition involves giving work back to people collectively instead of driving decision-making from above.[72] Ongoing adaptive leadership and problem-solving capabilities may be necessary ingredients for the sustainability of EBPs due to the fluidity and complexity of community systems environments.

Transition of the implementation support role. If intermediary organizations take too great of a responsibility for ensuring local implementation processes, fading their support role can be difficult and also transferring more implementation leadership to coalition leaders and implementation teams has a greater likelihood of failing.[70,113,114] In some situations, it may be helpful for intermediary organizations to develop an explicit transition strategy with community Triple P coalitions. In other situations, the realization that coalition leaders and implementation teams have started coalition-regulation processes signals the transition of the intermediary organization out of the regular flow of local implementation work.

There will likely be future circumstances that create vulnerability for sustaining effective implementation and scale-up within community Triple P coalitions – times of turbulence and change in community or statewide environments, changes in leadership, and changes in the fit or feasibility of the Triple P system. Intermediary organizations can be proactive by discussing these potentials with coalition leadership and implementation teams prior to transitioning away from local implementation processes and explore how these circumstances might be addressed should they arise. There are occasions when re-engaging intermediary organizations may be particularly appropriate and offer a constructive approach.

Finally, the collaborative partnership and mutual learning that has taken place between intermediary organizations, community Triple P coalition members, and other co-creation partners should be recognized and celebrated. Because intensive relationships between external providers of implementation support and local partners are likely to last across several years, ensuring space and time for healthy reflection and celebration can strengthen the partnership even as it takes a new, less intensive form. This also promotes the likelihood that coalition members will continue to reach out to intermediary organizations for ongoing needs or share the benefits of engaging with the intermediary organization with statewide colleagues.

A Core Story of Implementation Support, Flexibly Applied

In summary, NCIC-TP suggests that the development of implementation capacity, tailored within local contexts, may be most effectively served by the common-elements approach detailed through this implementation support plan rather than by a prescriptive approach to external implementation support. Because the process of implementation occurs in complex and dynamic environments and depends on local factors such as resources, stability, and timing, implementation support activities may need to be adapted throughout the support period.

NCIC-TP therefore offers a core story of implementation support that can be flexibly applied across NC community Triple P coalitions. As depicted in Figure 6, intermediary organizations adaptively provide implementation support by responsively integrating practice principles and core practice components to tailor the support process, which has been widely discussed as a key factor for successfully contributing to local implementation capacity and performance.[57-59,61-65,110,111,114,115]

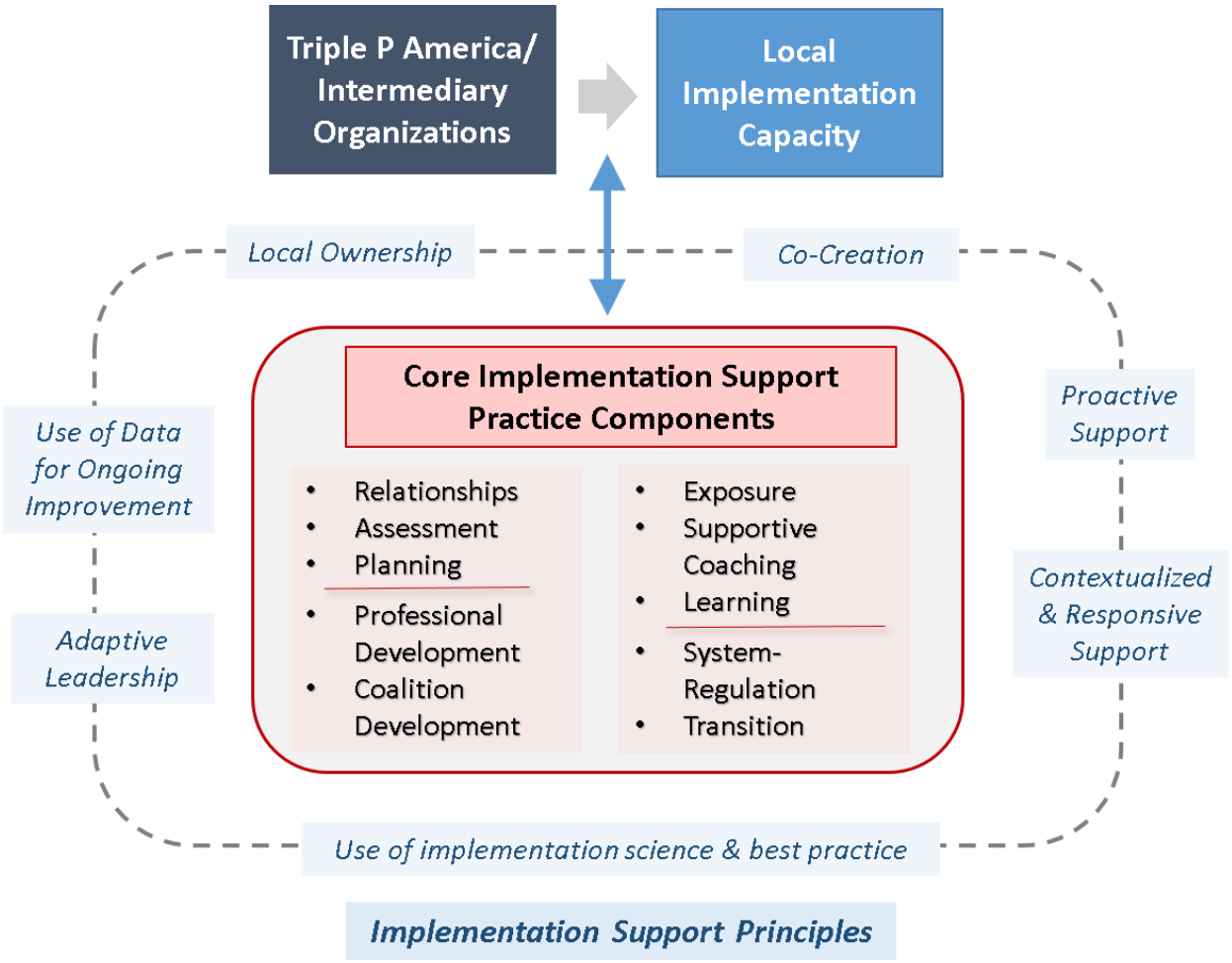

Figure 6. Unpacking the external implementation support process for contributing to the development of local implementation capacity and performance.

APPENDIX I: Recommended Tools to Support Implementation & Scale-Up Processes

During the implementation and scale-up process, several tools may be useful to community Triple P coalition leaders and implementation teams as they develop local implementation policies and practices. In addition, external providers of implementation support may find these tools helpful as they work closely with coalition leaders and teams to support local decision-making and documentation.

Tool Name	Brief Description	Used by	Recommended Stage or Frequency	Location
The Hexagon Tool	The National Implementation Research Network's *Hexagon Tool* is a review and discussion tool organized around six-components (*need*, *fit*, *resources*, *evidence*, *readiness*, *capacity*) that can be used to support program selection. This tool can be used both for initial discussions about the adoption of the Triple P system and for ongoing discussions about the adoption of additional Triple P programs and media strategies within the system.	Coalition leaders	Readiness & Exploration; as needed when considering additional Triple P programs	http://implementation.fpg.unc.edu/resources/hexagon-tool-exploring-context
NCIC-TP Readiness Worksheet Series	A series of readiness worksheets, adapted from Romney and colleagues' Triple P readiness worksheets,[94] can be used to prepare local stakeholders for understanding and managing expectations for implementing or scaling Triple P. These worksheets can assist local stakeholders to consider requirements and practices associated with effective Triple P	Intermediary organizations; Coalition leaders & implementation teams; Service agency leaders (particularly the	Readiness & Exploration; Capacity Development	Draft worksheet series is being developed by NCIC-TP

	implementation and identify gaps that may need to be addressed before moving forward. (1) *Community Triple P Readiness for Scaling Triple P*: this worksheet can be used to determine the presence of community structures and practices that may indicate level of readiness to support communitywide Triple P scale-up. (2) *Community Triple P Coalition Readiness to Participate in Intermediary Support*: this worksheet allows intermediary organizations to collect basic information about community Triple P coalitions and to assess key factors related to readiness for partnering with an intermediary organization for Triple P implementation support. (3) *Service Agency Readiness for Implementing Triple P Interventions*: this worksheet can be used to determine the presence of key *service agency* practices that may indicate level of readiness to support implementation of Triple P interventions.	*Service Agency version*)		
NCIC-TP Implementation Capacity	This series of five semi-structured discussion protocols can be used to facilitate collaborative inquiry and informal assessment of the	Intermediary organizations; Coalition	Readiness & Exploration; as	Draft discussion tool series is being

Discussion Tool Series	involvement of co-creation partners and the four core areas of implementation capacity: linked leadership and implementation teams, professional development infrastructure, quality and outcome monitoring systems, and media and networking capacity. These protocols may be particularly helpful when more structured or specific implementation assessments are unwarranted, as they were written about *global* details of local prevention goals, coalition strategic plans, coalition policies and practices, and implementation successes and needs. *Despite the utility of these discussion tools, the importance of using specific assessments of need to tailor implementation support and implementation planning, rather than relying only on global assessments, has been documented in the context of progressing communitywide prevention efforts.*[96] *Therefore, it is strongly recommended that coalition leaders and intermediary organizations not rely only on these semi-structured discussion tools.*	leaders & implementation teams	otherwise helpful during later stages	developed by NCIC-TP
Technical Assistance Analysis Discussion Tool	Blase[115] offers a quantitative assessment of required intensity of technical assistance that can be used to score ten relevant factors on a continuum from basic to intensive technical assistance. This discussion tool can help discern the intensity of external implementation	Coalition leaders, intermediary organizations,	Readiness & Exploration	http://challengingbehavior.fmhi.usf.edu/do/resources/documents/roadmap_4.pdf (see page 4)

	support needed to match the degree of change being undertaken by a local community. Blase acknowledges the need for more intensive implementation support and change facilitation when there is a significant discrepancy between current and desired practice.	and co-creation partners		
Creating Team Terms of Reference Worksheet	This worksheet, developed by the National Implementation Research Network, can be used to facilitate discussion around several possible components of team terms of reference, including vision, goals and objectives, scope and boundaries, roles and responsibilities, communication protocols, resources, authority, deliverables, and implementation plans. Discussion of some or all of these components can prepare a team to create a more formal terms of reference document.	Individual teams within community Triple P coalitions (e.g., coalition leadership teams, coalition implementation teams, agency leadership teams, agency implementation teams)	Capacity Development	http://implementation.fpg.unc.edu/resources/activity-3-4-terms-reference-examples-and-mock
Communication Protocol Worksheet	This worksheet, developed by the National Implementation Research Network, helps teams within an agency or across agencies establish new communication patterns with clear expectations and roles. Beyond linking leadership and implementation teams, these communication protocols can also be established between groups of front-line	Linked teams or groups within community Triple P coalitions	Capacity Development	See Lesson 9: http://implementation.fpg.unc.edu/modules-and-lessons#

	practitioners and agency or coalition leadership to support practice-policy communication cycles.			
NCIC-TP Locus of Responsibility Worksheet	Clearly establishing responsibility for various aspects of implementation can be challenging in the context of community coalitions and multi-level systems of implementation support.[8] This worksheet allows intermediary organizations and community Triple P coalition members to discuss and clarify three types of responsibility across all implementation core components:[5,27] *who does it*, *who assesses it*, and *who ensures it*? Various aspects of responsibility can be assigned to the *statewide Triple P supports* (i.e., the North Carolina Triple P State Leadership Team, North Carolina Triple P Learning Collaborative, North Carolina Triple P Evaluation), *Triple P America*, *Community Triple P Coalition*, *Local Triple P Service Agencies*, *Local Triple P Practitioners*, or designated as "unclear and in need of further review."	Coalition leadership teams; Coalition implementation teams	Capacity Building	Draft worksheet is being developed by NCIC-TP
Triple P America Training Outcome Reports	Triple P America provides training outcome reports that detail pre- and post-training learner outcomes and participant experience data (e.g., satisfaction) for each Triple P training course conducted. Also included are participants' accreditation statuses. These reports provide	Coalition implementation teams; Agency leaders and	Capacity Building	Provided by Triple P America

	valuable information for coalitions, service agencies, and practitioners on the Triple P training process.	implementation teams		
Triple P Peer Support Checklist	This checklist, available from Triple P America, allows tracking of key peer support activities and monitoring core peer support components (e.g., use of audio or video during case presentations).	Coalition implementation teams; Agency implementation teams; Coalition Triple P practitioners	Capacity Building; Supported Performance	Provided by Triple P America
Stay Positive Media Strategies	Stay Positive media strategies include Tippapers, informational materials (flyers, brochures, and posters), newspaper articles, roadside billboards, television and radio spots, and Tip Sheets. Individual media strategies can be adopted and combined into a local media campaign, and strategically deployed within community social networks.	Coalition leadership teams; Coalition implementation teams	Capacity Development	Triple P America
Collective Learning Database	This electronic database allows the documentation of identified implementation barriers and facilitators, the strategies used to address barriers, and other collective learning insights as appropriate across the implementation and scale-up initiative.	Coalition leaders, implementation teams, agency representatives, and other partners	Across all stages	In development by NCIC-TP

APPENDIX II: Recommended Measures of Implementation & Scale-Up

Several process and outcome measures may be useful as coalition implementation teams monitor implementation and scale-up. External providers of implementation support may work closely with coalition implementation teams to utilize these measures and may be responsible for facilitating these assessments as noted, needed, or helpful.

Measure Name	Brief Description	Respondents	Recommended Stage or Frequency	Location
Community Readiness Scale	Chilenski and colleagues'[116] community readiness scale offers a 15-item, four-factor assessment of community readiness to implement large-scale community change projects that involve several community partners. Subscales offer information about *community attachment*, *community initiative*, *community efficacy*, and *community leadership*.	Mixed samples of community leaders, service agency representatives, parents, and youth	During initial readiness activities	Draft is complete and being processed by NCIC-TP for posting on website
Community Triple P Buy-In Scale	This scale was adapted by NCIC-TP from Perkins and colleagues'[117] five-item measure of community buy-in for local PROSPER initiatives. The scale contains five items that assess the degree to which influential community leaders are committed to and champion the community Triple P initiative.	Coalition and agency Triple P coordinators and implementation team members (excluding lead agency directors and service agency directors)	Across all stages	Draft is complete and being processed by NCIC-TP for posting on website

Organizational Readiness for Implementing Change (ORIC) Measures	Shea and colleagues' 10-item ORIC measure[118] has been adapted by NCIC-TP to offer brief measures for assessing readiness to implement or scale Triple P. The instrument provides scores related to leaders' commitment to the change process (*change commitment*) and their sense of efficacy that change can be accomplished (*change efficacy*). (1) *Coalition Version:* This version can be used to assess community coalition readiness to scale Triple P. (2) *Service Agency Version:* This version can be used to assess service agency readiness to implement Triple P interventions. It may be helpful as community service agencies are considered for membership in the community Triple P coalition.	Coalition leaders (*Coalition Version*); Service agency leaders (*Service Agency Version*)	Readiness & Exploration (*Coalition Version*); Capacity Development (*Service Agency Version*)	Drafts are complete and being processed by NCIC-TP for posting on website
The Wilder Collaboration Factors Inventory	This 40-item inventory offers a research-based measure that can be used to assess 20 collaborative factors among community agencies and partners involved in emergent or existing community Triple P coalitions.	Co-creation partners; Coalition leaders, including from both lead and service agencies	Across all stages	http://www.wilder.org/Wilder-Research/Research-Services/Pages/Wilder-Collaboration-Factors-Inventory.aspx

Community Capacity Assessment for Scaling the Triple P System of Interventions (CCA-TP)	The CCA-TP was originally developed by TPIE evaluators to provide an assessment of key abilities and related resources in communities implementing the Triple P system of interventions. For the development of the CCA-TP, TPIE evaluators relied heavily on previous assessment protocols used to measure the capacity of counties or school districts to effectively support the implementation and scaling of evidence-based interventions.[119,120] The CCA-TP is a facilitated group self-assessment that, having been further refined since TPIE, now includes 110 items organized within the following eleven indices: a. Coalition Leadership Team, b. Coalition Implementation Team, c. Prevention System Alignment, d. Action Planning, e. Recruitment & Selection, f. Training, g. Coaching, h. Fidelity Assessment, i. Decision-Support Data System, j. Facilitative Administration, and k. Systems Intervention. Additionally, three *summary indices* can be calculated:	Coalition leaders and implementation team members	Semi-annually across all stages	Draft is complete and being packaged by NCIC-TP for posting on website

	a. Coalition Implementation Teams Index (indices a-d above), b. Coalition Implementation Drivers Index (indices e-k above), and c. Coalition Sustainability Planning Index (combining three specific items). *To ensure reliable assessment, the CCA-TP should be administered by an implementation support specialist.*			
Implementation Drivers Assessment for Agencies Implementing Triple P Interventions (IDA-TP)	The IDA-TP was originally developed by TPIE evaluators to assess the presence of active implementation infrastructure and best practices among Triple P service agencies to support the intended delivery of Triple P interventions. TPIE evaluators relied heavily on previously established implementation drivers assessments and technical assistance tools for the development of IDA-TP items and scales.[121-125] The IDA-TP is a facilitated group self-assessment that, having been further refined since TPIE, now includes 89 items organized within the following eight indices: a. Agency Implementation Capacity, b. Recruitment & Selection, c. Training, d. Coaching, e. Fidelity Assessment, f. Decision-Support Data System,	Service agency leaders and implementation team members	Semi-annually across all stages	Draft is complete and being packaged by NCIC-TP for posting on website

	g. Facilitative Administration, and h. Systems Intervention. Additionally, two *summary indices* can be calculated: a. Agency Implementation Drivers Index (indices b-h above), and d. Agency Sustainability Planning Index (combining three specific items). *To ensure reliable assessment, the IDA-TP should be administered by an implementation support specialist.*			
Team Functioning Measures	Chilenski and colleagues[70] utilized five brief measures to assess key aspects of PROSPER teams' functioning in their investigation of the importance of collaboration between external providers of implementation support and community prevention teams. (1) *Team Leadership*: Chilenski and colleagues' eight-item measure of the degree to which team leadership encourages input and consensus, along with promotes a friendly work-environment, originally adapted from Kegler and colleagues.[20] (2) *Team Culture*: Chilenski and colleagues' eight-item measure of team	Individual teams within community Triple P coalitions (e.g., coalition leadership teams, coalition implementation teams, agency leadership teams, agency implementation teams)	Capacity Building; Supported Performance; Local Coalition-Regulation	Drafts are complete and being processed by NCIC-TP for posting on website

	atmosphere, originally adapted from Kegler and colleagues.[20] (3) *Team Goals*: Perkins and colleagues'[117] two-item measure of the degree to which teams have developed clear goals and governance procedures. (4) *Team Focus on Work*: Chilenski and colleagues' five-item measure of teams' work orientation, originally adapted from Moos & Moos.[126] (5) *Team Tension*: Feinberg and colleagues'[127] single-item measure of team tension.			
Triple P Service Agency Implementation Climate Scale	A seven-item measure of agency implementation climate was adapted by TPIE evaluators from Klein, Conn, and Sorra's implementation climate scale.[128] Based on data from this measure, TPIE results indicated that Triple P service agencies with less hospitable implementation climates were at greater risk for discontinuing Triple P implementation during the TPIE evaluation period.[50] Klein and colleagues demonstrated that their original implementation climate scale was associated with leadership and management support of innovation implementation.[128] Therefore, lower scores on the Triple P version of the scale may suggest a timely need for county Triple P	Triple P service agency practitioners and staff members	Supported Performance; Local Coalition-Regulation	Draft is complete and being processed by NCIC-TP for posting on website

	coalition implementation teams to help re-establish service agency leadership and implementation teams' local support for Triple P. Alternate measures of implementation climate are available as well,[129,130] and can be considered based on local preferences or needs.			
Coalition-Regulation	Measures of the five proposed components of coalition-regulation are being explored by the NCIC-TP Team: • Collective-management tools • Collective-efficacy • Collective agency • Collective-sufficiency • Adaptive problem solving			
Social Network Analysis	Social networking analysis techniques can be helpful in mapping the social networks of community Triple P coalition members to inform strategic placement of Stay Positive media strategies and accelerate word-of-mouth diffusion of Triple P information.	Coalition leadership teams; Coalition implementation teams	Capacity Development	Valente and colleagues[49] describe and provide some simple measures of social networks that can be used to monitor and improve social networks in the local community

Stay Positive Media Tracking	Triple P America has suggested several ways to track the performance of Stay Positive media strategies, including: (1) *Semi-annual analytics* provided by Triple P International that detail utilization of the local Stay Positive website by practitioners and parents, and (2) *The Stay Positive Campaign Tracking Form*, a Microsoft Excel database that can be used by coalition implementation teams to record details about the number, placements, estimated reach, and intended purposes of Stay Positive media strategies in the community.	These are output tracking measures – respondents are not applicable	Supported Performance; Local Coalition-Regulation	Triple P America
Triple P System Implementation Outcomes: *Accessibility**	To monitor the accessibility of Triple P interventions with the community, Triple P coalitions might survey parents about the accessibility of Triple P programs. Reviewing the geographic distribution of Triple P practitioners across the region may also provide helpful information.	Community parents; Community service agencies and practitioners	Supported Performance; Local Coalition-Regulation	Not applicable
Triple P System Implementation Outcomes:	The Prevention System Alignment Index within the *Coalition Capacity Assessment for Communities Scaling the Triple P System of Interventions (CCA-TP)* provides information about the degree to which Triple P	See CCA-TP row above		

System Alignment*	interventions have been adopted in response to identified community wellbeing needs, the degree to which Triple P service agencies have been included to fill key service gaps within the community coalition, and the extent to which coalition agencies are aligned and supported to collaborate.			
Triple P System Implementation Outcomes: *Feasibility**	The *Triple P Feasibility Scale* is a five-item measure of Triple P implementation feasibility, adapted for use with Triple P from Weiner, Dorsey, Stanick, Halko, Powell, & Lewis.[131]	Triple P coalition practitioners; Triple P coalition partners	Supported Performance; Local Coalition-Regulation	In development by NCIC-TP
Triple P System Implementation Outcomes: *Appropriateness**	The *Triple P Appropriateness Scale* is a five-item measure of Triple P appropriateness, adapted for use with Triple P from Weiner, Dorsey, Stanick, Halko, Powell, & Lewis.[131] This scale can be used to measure either Triple P implementation appropriateness with community Triple P coalition practitioners and partners or Triple P program delivery appropriateness with families.	Triple P coalition practitioners; Triple P coalition partners; Community families	Supported Performance; Local Coalition-Regulation	In development by NCIC-TP
Triple P System Implementation Outcomes: *Acceptability**	Two measures are recommended: (1) The *Triple P Acceptability Scale* is a five-item measure of Triple P acceptability, adapted for use with Triple P from Weiner, Dorsey, Stanick, Halko, Powell, & Lewis.[131] This scale can be used to	Triple P coalition practitioners; Triple P coalition partners; Community families	Supported Performance; Local Coalition-Regulation	The *Triple P Acceptability Scale* is in development by NCIC-TP The *Caregiver Satisfaction*

	measure either Triple P implementation acceptability with community Triple P coalition practitioners and partners or Triple P program delivery acceptability with families. (2) Triple P America's *Caregiver Satisfaction Questionnaire* provides a brief measure of caregivers' satisfaction with Triple P services they have received.			*Questionnaire* is available from Triple P America
Triple P System Implementation Outcomes: *Fidelity**	Three approaches to measuring Triple P fidelity include: (1) *Triple P Session Checklists*: provided by Triple P America, these checklists offer a session-by-session way for practitioners to track and report quality adherence related to Triple P program delivery. (2) *Caregiver Engagement*: coalition Triple P practitioners might track and report caregiver engagement with Triple P program activities by monitoring caregiver participation in, and completion of, in-session activities and between-session assignments. (3) *Dosage*: coalition Triple P practitioners might track and report the number of	Coalition Triple P practitioners	Supported Performance; Local Coalition-Regulation	Triple P America supplies Session Checklists and may have strategies for measuring caregiver engagement and dosage

	Triple P sessions that caregivers complete as a proportion of the total number of Triple P sessions indicated for a given Triple P program.			
Triple P System Implementation Outcomes: *Reach**	Triple P coalitions can measure reach as: (1) the number of community families who receive Triple P interventions compared to those who are eligible to receive Triple P interventions, and/or (2) the number of practitioners (actively) delivering the Triple P interventions compared to the number trained in or expected to deliver Triple P interventions.	Triple P practitioner contact records; Triple P practitioner training records	Supported Performance; Local Coalition-Regulation	Community Triple P Coalition records
Triple P System Implementation Outcomes: *Cost**	The recent publication from the National Academies of Sciences, Engineering, and Medicine, *Advancing the Power of Economic Evidence to Inform Investments in Children, Youth, and Families*, describes and provides methods for tracking cost of evidence-based programs such as Triple P.[79]		Supported Performance; Local Coalition-Regulation	
Triple P System Implementation Outcomes: *Sustainability**	Triple P coalitions can measure sustainment of Triple P services by tracking the extent to which coalition Triple P service agencies and practitioners remain actively implementing and delivering Triple P.	Coalition service agencies; Coalition Triple P practitioners	Supported Performance; Local Coalition-Regulation	Not applicable

* Those interested in browsing additional implementation outcome measures may benefit from searching the Society for Implementation Research Collaboration's (SIRC) instrument repository at https://www.societyforimplementationresearchcollaboration.org/sirc-projects/sirc-instrument-project/. As part of a study funded

by the National Institute of Mental Health to advance measurement in implementation science, each measure in the repository is rated according to its evidence-base and pragmatism for use in community settings.[132,133] While a SIRC membership is needed to access this repository, interested stakeholders can contact NCIC-TP team members if they do not have access and are unable to purchase one.

APPENDIX III: Recommended Measures and Records of Implementation Support Quality

Throughout the support period, external providers of implementation support benefit from collecting and using data about the delivery and outcomes of their provision of implementation support to optimize their contributions. Several measures and quality assurance tools may be helpful.

Measure Name	Brief Description	Respondents	Recommended Stage or Frequency	Location
Brief Alliance Inventory for Implementation Support	Adapting Mallinckrodt & Tekie's[134] 16-item Brief Alliance Inventory (BAI) will be explored by the NCIC-TP team to provide a measure of the collaborative nature of the relationship between external providers of implementation support and coalition leaders and implementation team members. In its present form, the BAI provides information about two relationship components: *Bonds* (mutual trust, acceptance, and confidence), and *Goals/Tasks* (mutual endorsement of working goals and relevance of associated tasks).	Coalition leaders and implementation team members	Quarterly across all stages	In exploration by NCIC-TP
Implementation Support Collaboration Scale	Chilenski and colleagues'[70] seven-item scale to describe the degree to which the local team communicates with and works collaboratively and effectively with the implementation support team. This scale was originally used with PROSPER Prevention Coordinators.	Members of external implementation support teams	Quarterly across all stages	In development by NCIC-TP

Contact with External Providers of Implementation Support	Chilenski and colleagues'[70] two-item measure of the frequency of contact between implementation technical assistance providers and community teams, originally used with PROSPER Prevention Coordinators.	Members of external implementation support teams	Quarterly across all stages	In development by NCIC-TP
Implementation Support Quality Assurance Checklists	Forms developed by NCIC-TP to track the completion of key activities and document key outcomes of the *Readiness & Exploration* stage of implementation support and the *Transition of Support Role* process.	Members of external implementation support teams	At the end of Readiness & Exploration; At the end of the external implementation support period	In development by NCIC-TP
Individual Professional Development Indicators	Pre-training, post-training, and follow-up learning indicators should be developed for major implementation science training events with community leaders and implementation team members. Learning indicators should be aligned with pre-established learning objectives and be appropriate to knowledge or skill acquisition.	Training participants, usually coalition leaders and implementation team members	Capacity Development	Will be developed as needed by NCIC-TP; a database of items will be made available on the NCIC-TP website once sufficient
Local Implementation Capacity & Performance Outcomes	As the development of local implementation capacity and performance are the primary outcomes of external implementation support, the *CCA-TP* and the *IDA-TP* can be utilized regularly to monitor the long-term effectiveness of implementation support. The CCA-TP, being administered to coalition leaders and implementation team members, may be the most appropriate and direct measure of the outcomes of external implementation support. Though relevant to external implementation support outcomes as well, the IDA-TP may be more fitting to measure the outcomes of implementation support from the coalition implementation team to Triple P service agencies. See the prior section on measures of implementation for details about the CCA-TP and IDA-TP.			

Supported Performance Records	*Supported Performance Record*: This form provides a quality assurance record of specifically designed learning experiences collaboratively planned between external providers of implementation support and coalition leaders and implementation team members. Learning experiences should be designed to facilitate specific implementation skill demonstration and improvement (e.g., of adaptive leadership skills, facilitating the development of agency teams' terms of reference). The form also allows the documentation of lessons learned and coaching strategies that were responsively employed after the learning experience.	Members of external implementation support teams and support recipients collaboratively complete these forms	Supported Performance	In development by NCIC-TP
Implementation Support Performance Monitoring	A bank of items and scales has been adopted or adapted by NCIC-TP to assess various aspects of implementation support performance. These items and scales can be used for discrete training events, support sessions, or site visits. Alternatively, they can be used as summative indicators of performance across time intervals or entire support periods. (1) *Quality item*: measures participants' attitudes about the quality of training or support delivered.	Training participants and support recipients, usually coalition leaders and implementation team members	Capacity Development; Supported Performance; At the end of the external implementation support period	In development by NCIC-TP

	(2) *Use items*: three items are available to measure participants' beliefs about their future use of implementation strategies covered during training or support events (i.e., *likely use*, *confidence to use*, *adequacy of support to put to use*). Separately, an item is available to measure participants' *actual use* of implementation strategies covered during historical training or support events. (3) *Usefulness item*: measures support recipients' retrospective beliefs about the usefulness of training or support that was received. (4) *Feasibility Scale*: a five-item measure of implementation strategy feasibility, adapted from Weiner, Dorsey, Stanick, Halko, Powell, & Lewis.[131] (5) *Appropriateness Scale*: a five-item measure of training or support appropriateness, adapted from Weiner, Dorsey, Stanick, Halko, Powell, & Lewis.[131] (6) *Acceptability Scale*: a five-item measure of training or support acceptability, adapted from Weiner, Dorsey, Stanick, Halko, Powell, & Lewis.[131]			

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